

# THE MANITOBA TECHNOLOGIST



21  
new  
members

**Member profile —**  
Inside Sales Manager, Jeff Sadler, C.E.T.

**Upgrade your skills —**  
Sign-up for fall courses now!

**Hitting the green —**  
Golf tournament highlights



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and Technologists  
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Manitoba members,  
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From left to right: Evan Himelstein, RRC Polytech; Robert Okabe, CTTAM CEO/Registrar and Lori Royal, Skills Canada (MB).

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Cover photo insert: From left to right: Josee Remillard, C.E.T., CTTAM President; Andrew Procca, C.E.T., Past President; Kellie Orr, C.E.T., Past President and Robert Okabe, C.E.T., FEC (Hon.), IntET (Canada), CTTAM CEO and Registrar.





Our President's message

# Sunny side up

This is the season of busy days, taking time to vacation and a time to look after those outside tasks that need warmer weather to get done. With six months into 2023, we also need to review our Continuing Professional Development activities. It only takes a few minutes to report your credits. Let's all login to our member accounts and record our progress before the end of summer.



*June 21 marks the official start* of summer in the northern hemisphere and the longest day of the year. There is a lot going on with the arrival of warmer temperatures, summer holidays and spending more time outdoors. It also marks a busy time for your organization and the roles the leadership team takes on.

### Strong and consistent voice

On May 13, in Toronto, I attended a leadership council meeting representing our members' interests with the Technology Professionals Canada (TPC). TPC is an alliance of engineering and applied science technology professional organizations. CTTAM joined this alliance in October 2020. Together we work with other provinces to regulate the conduct of engineering technology and applied science professionals.

One major takeaway from the seminar, was having CTTAM sign an agreement for a National Competency Standard.

This is one of the first steps in getting all provinces unified across Canada. The final goal is to have one national voice for engineering and applied science technology professional organizations.

I find these meetings important as they help build our reputation, increase our visibility within the profession, aid in making impactful connections and build a stronger network of like-minded professionals.

### A return to road work and delays

Warmer weather also means that construction workers are on the job repairing our streets or fixing our water and sewer lines – all essential public services. Travel delays, traffic jams and the use of the (dare I say it) merge, all make travelling within the province in summer more challenging. We all deserve to work safely and return home to our loved ones at the end of the day.

So, let's slow down and drive cautiously around construction zones and roadwork crews.

### Survey says

Our annual salary survey report was released on May 30. The survey was conducted in April 2023 and received responses from 753 technician and technologist professionals with diverse company profiles.

Over 45% of our members are employed in the civil, municipal and structural disciplines as well as members from construction management, surveying, geotechnical professions.

You'll want to give the full survey a read on our [website](#) if you haven't already.

Get outside, enjoy summer and be safe.

*Josee*

Josee Remillard, C.E.T.  
CTTAM President



### About Josee

Josee has over 11 years of experience in the consulting industry and has been responsible for providing project management as well as internal project coordination on medium to large scale projects. She works at Crosier Kilgour & Partners Ltd. as a Structural Technologist. Josee has a diploma in Structural Engineering Technology from RRC Polytech.

Josee has been a member since 2015. She has been a Board Member since 2019 and is in her first year of a two-year term as our President.



# Making the most of your membership

Connecting people around a chosen profession

Summer is here.

All of us at CTTAM wish our members a safe and fun season, full of wonderful activities, a chance to relax and explore our diverse and spectacular country.

Wherever your travels take you, know that your organization is working to provide the best of benefits for our members. We are consistently looking at ways to better serve you and provide the exposure, guidance and value that as a member of a professional organization you should expect.

## Membership counts

You will see when you visit the "Welcome to new members" (page 6) in this issue, that we have experienced a steady flow of new applications over the last few months. This stream of new members has off-set any who have retired or left CTTAM. I hope that you use your membership to the fullest, exploring the many advantages of being a member. If you haven't already, check out our *Members Toolkit* section on our [website](#). Here you will find resources that include insurance programs, retail discounts and scholarship opportunities.

I recently attended applied research presentations at both RRC Polytech and Assiniboine Community College. As a strong supporter in the future of technology careers, I was thrilled and renewed to see such a large and varied turnout of students at these events.

## Celebrating Pride Month

The month of June is Pride Month, a global movement and celebration that recognizes the history, resiliency,

strength and achievements of the 2SLGBTQ+ community worldwide.

Pride month is an opportunity to celebrate diversity and work towards a more inclusive future, where everyone is treated with respect, dignity and equality.

There are many ways for all of us to get involved and show our support:

- Attend local pride festivals and events where you live;
- Get to know 2SLGBTQ+ coworkers, friends and family;
- Support 2SLGBTQ+-owned businesses and
- Consider donating to or volunteering with an 2SLGBTQ+ organization.

The Government of Canada has a [pride month toolkit](#) (digital version) which can be used to promote pride month all summer long.

## Summer office hours

For the summer months office hours are Monday to Thursday, 8 am to 4pm except on Fridays when we are open from 8 am to noon. These hours are effective until after the September long weekend.

Thank you to all our members and their loyalty to our organization. Be safe, take the time to recharge and to enjoy the summer weather and promoting the applied sciences as it is a win for everyone when we do.



**Robert Okabe**  
C.E.T., FEC (Hon.), IntET (Canada),  
CTTAM CEO and Registrar

*Robert (Bob) Okabe, C.E.T., FEC (Hon.), IntET (Canada), has been our CEO and Registrar since July 2015. He has a Civil Engineering Technology Diploma from RRC Polytech. Bob has served as Association President, Panel of Examiners Committee Member, CCTT Director and past Chair and Program Reviewer for CTAB and TAC.*





# Check out our new members

Your membership matters

Being certified permits our members to use one of two titles, Certified Technician (C. Tech.) or Certified Engineering Technologist (C.E.T.). These designations are recognized by industry and employers and indicate that our members are part of a professional association. Certified members may also vote in our elections, hold office and participate on one of our many committees. Your membership provides many discounts on different services along with access to the Canadian Technical Employment Network job bank. Cheers to our new members.

## Technicians

**Brian Obirek**, C. Tech.  
**Bernabe Tuazon**, C. Tech.  
**Iyad Ma'louf**, C. Tech.

Shaw Cable  
Winnipeg Regional Health Authority

**Mithun Bindhu Mangalan**, C. Tech. New Flyer Industries  
**Richard Downing**, C. Tech. DGH Engineering Ltd  
**Thomas MacNutt**, C. Tech. Stantec

## Technologists

**Ataallah Momeni Heravi**, C.E.T.  
**Brandon Link**, C.E.T.

Russell Redi-Mix Concrete  
Manitoba Hydro  
KGS Group  
AGI Westfield  
Prairie Mountain Health  
Convion Environments Ltd.

**Christopher Cavanagh**, C.E.T.  
**Clive Bryson**, C.E.T.  
**Harry Schellenberg**, C.E.T.  
**Jismy Xavier**, C.E.T.  
**John Tubo**, C.E.T.

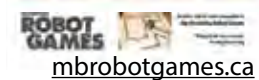
**Mark Gomulinski**, C.E.T. City of Winnipeg  
**Matt Basic**, C.E.T. Tri-Core Projects Ltd.  
**Matthias Harder**, C.E.T. Lode King Industries  
**Riley McLeod**, C.E.T. Monarch Industries  
**Robert Semeniuk**, C.E.T. Manitoba Hydro  
**Xiangming Thomas Meng**, C.E.T. Sandvik PU Winnipeg  
**Yang Yang**, C.E.T. PTI Transformers  
**Yanyu Li**, C.E.T. WSP

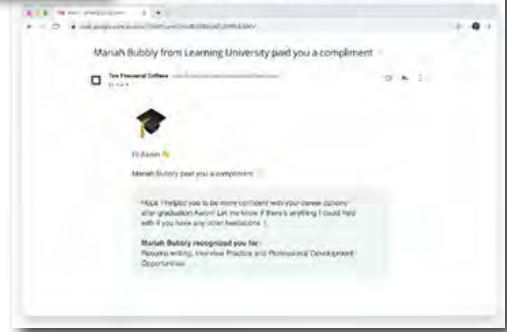


# Building on our industry connections

Our strategic partners

Having strategic partnerships with likeminded organizations, provides us and our associates with mutual opportunities to build brand loyalties with our members, along with increased opportunities to attract and retain highly-skilled technicians and technologists.





RRC Polytech Café

# Ten Thousand Coffees

THIS EXCLUSIVE ONLINE NETWORKING AND MENTORING PLATFORM INTRODUCES YOU TO ALUMNI AND STUDENTS BASED ON YOUR SPECIFIC CAREER INTERESTS AND GOALS.

Join the RRC Polytech Café, powered by Ten Thousand Coffees and develop essential skills by mentoring students. It also provides the opportunity to foster learning with experienced alumni from the RRC Polytech community. This online platform is free to use for college alumni.

Joining the online café helps you to:

- Shape the careers of students and young alumni by sharing your career advice and experience;
- Develop your networking and mentoring skills through real-world practice;
- Earn Continuing Professional Development credits and
- Build your network of RRC Polytech alumni and faculty based on your industry and interests.

### Setting up your virtual coffee chat

It is easy to sign-up as it is based on whether you are college alumni or a student. Take an hour every 4 weeks to meet someone new from the RRC Polytech community. Learn, share, answer questions, and make your network work for you.

You'll receive a monthly introduction to a student or fellow alumni based on your career interests and goals. Then you can set-up a time and date to chat online to share your advice and experience.

You will receive an official LinkedIn certification to recognize your commitment to mentoring and networking and

Once you join, all introductions are sent directly to your inbox, so you don't need to use other applications.

### How do you join?

You should first visit the online RRC Polytech Café. Here you will find out more and can review the steps needed to join. The easiest and quickest way to gain access is to sign-up using your preferred email address.

### Guidelines in place for safe use

Remember to use safe-networking practices in all interactions. There are several common-sense precautions listed on RRC Polytech's website that will help ensure a positive experience when you connect through Ten Thousand Coffees.

Participating in the RRC Polytech Café  
is a Continuing Professional Development activity.

# Inspiring future generations

Empowering young women to excel in technology and engineering

This year's **Young Women in Technology Conference** was held on Tuesday, June 13, 2023, at RRC Polytech on the Notre Dame Campus. Fifty-six, grade 8 female students engaged with each other and the larger tech community to help them explore their full potential in a technical career.

The conference is a one-day event for young women to learn about the many trade and technology careers available in today's employment market.

## Youth mentoring youth

The conference highlighted different vocations in the civil, electrical/electronics and mechanical technologies. Mentors from local high schools participated in the activities with the students and provided information about technology classes. Much appreciation to the 11 students from Collège Sturgeon Heights Collegiate, Kildonan East Collegiate, Miles Macdonell Collegiate and Murdoch McKay Collegiate who volunteered as mentors.

## Hands-on activities

Skills Canada (Manitoba) along with RRC Polytech arranged for the students to participate in several activities. They built spaghetti towers, constructed circuit boards and surveyed the College grounds.

CTTAM provided sponsorship for the event and members volunteered their time, sharing their experiences with the students.



Student working on a circuit board.

Thank you to Aurora Brown, C.E.T. (from Buhler Versatile); Heather Espinola, C.E.T., Janice Sangroni and Lakmini Wickramasingha (all from Manitoba Transportation and Infrastructure) and Erica Campbell, C.E.T. (City of Winnipeg Water and Waste Department) for their informative presentations. Their enthusiasm for technology and graduating from a technology program has provided them with exciting and rewarding life-long careers.

## Exchanging knowledge and experiences

Aurora Brown captured the crowd's attention by explaining how she tests prototype tractors and creates prototypes from a 3D printer. A short video shown

by Heather Espinola surprised everyone with the sound of explosives breaking up rock to make way for a new road. Janice Sangroni loves travelling which is a fun part of her job as an analyst for Manitoba Transportation and Infrastructure.

Erica Campbell shared her experiences on many of the projects she's worked on throughout her 20-year career with one of her largest projects being the new North End Sewage Treatment Plant.

## Community support

Thank you to the teachers who support and promote these technology events. The conference was a success largely due to the hard work and planning of Lori Royal from Skills Canada (Manitoba).



Student working on a circuit board.

Thank you to Lori and her organization!



Photo from left to right: Heather Espinola, C.E.T.; Janice Sangroni, Aurora Brown, C.E.T. and Erica Campbell, C.E.T.





# Investing in the future

Your gift makes a difference in so many students' lives

The kindness of our members in setting-up endowments has truly benefited several students every year. These long-term investments help equip graduates with the skills and education necessary to become future leaders in their fields and in our communities.

Donations from alumni, donors and partners including CTTAM members, has helped RRC Polytech grow into a robust and agile training institution, able to meet the challenge of helping technology students to not only successfully graduate but also to become valued working professionals in the applied sciences industries.

CTTAM will graciously accept donations to the RRC Polytech endowment fund on our members behalf. Donors will receive a tax receipt directly from RRC Polytech.

In 2022, CTTAM donated \$14,000 to the Red River College Polytech endowment fund for technology scholarships.

### Endowment program details

Endowed gifts provide a way to have a lasting, long-term impact on the College and their students.

Endowments are the perfect vehicle to fund a scholarship, a bursary or an award. Your gift can:

- Transform learning and research spaces;
- Enhance their student experience;
- Advance Indigenous achievements and
- Support a specific program area.

### The choice is yours!

You retain the power to change your bequest at any time as your plans or financial circumstances change.

For more information, please contact Robert Okabe, CTTAM's CEO and Registrar, at 204-784-1080.

Information on established endowments and information how to make a donation, can be found on the RRC Polytech [website](#).



### Your donations

When you create an endowment fund in support of RRC Polytech, we invest the entire donation, and use the annual investment income to support the program, area, or funding priority of your choice. Endowments are also the perfect vehicle to fund a scholarship, a bursary, or an award.



**"Your gift of an endowment fund is an opportunity to leave a lasting legacy."**

*Robert Okabe, CTTAM CEO and Registrar*



Red River College Polytechnic (RRC Polytech) is Manitoba's largest institute of applied learning and research, with more than 200 full- and part-time degree, diploma and certificate options. Through hands-on and online learning opportunities and state-of-the-art instruction, we prepare our students to become leaders in their fields — while also ensuring they can meet changing industry demands, and contribute to the province's economic growth. More information can be found on their [website](#).

Photo credit: RRC Polytech Winnipeg Spring Convocation Ceremony. Photo is courtesy of RRC Polytech.

Member profile

# Jeff Sadler, C.E.T.



- CTTAM member since February 1992
- Has a relentless focus on customer satisfaction, sales growth and response time

Jeff manages the inside sales for Norscan Instruments Inc. He has worked at Norscan for over 28 years. He is able to provide superior customer service while staying current with the ever-changing technology in his industry.

**What is your job title and employer?**

I am employed at Norscan Instruments as an Inside Sales Manager.

**Where were you born? Where did you grow up?**

I was born in Windsor, Ontario. I spent most of my life growing up in Winnipeg, Manitoba.

I have also lived in Yorkton and Regina, Saskatchewan and Churchill, Manitoba.

**What program of study did you take? And where?**

I graduated from the Electronic Engineering Technologist diploma program at RRC Polytech in Winnipeg.

**Who was your first employer after graduation? What was your position?**

My first employer was Video Refit followed by Norscan Instruments Ltd.

At Video Refit I started as a service technician.

**What were your interests in high school?**

My main school interests were sciences and mathematics. My other interests were taking things apart to see how they worked and to repair them.

Sometimes seeing how something worked led to repairing it. I also enjoyed playing hockey which I still play today.



**How did you get into your line of work?**

I acquired my customer service experience when I was a Manager of Customer Service at the Royal Bank of Canada and my Electronic Engineering Technologist training from RRC Polytech both helped me when I first interviewed with Norscan. The technology company was looking for someone to look after their client service and training group.

My excellent communication and interpersonal skills, along with a personal brand of service, teamwork, integrity and customer satisfaction has served me well. This skill has enabled me to grow with the company.

**Did you have a person and/or mentor in your life that influenced your education and career choice?**

My parents' encouraging me to strive for an education was very helpful to me.

I went back to school mid-life for additional post-secondary education with the support and encouragement of my wife Karen, which I otherwise would not have been able to complete without her support. I was fortunate to have received a strong grounding in electronics from my instructors at RRC Polytech.

**How do you spend time outside of work?**

I enjoy spending time with my family. I also enjoy playing hockey, bike riding, and teaching scuba diving.

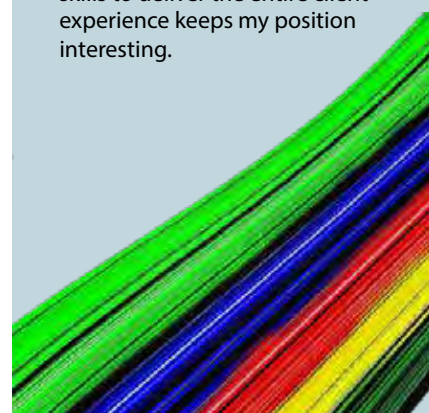
*Professional information*

The majority of my position is technical sales and customer support direct to customers.

I provide technical support for product selection, sales support for delivery, product training and also provide the first line of support for product integration.

The range of technical and non-technical roles I am responsible for often makes me the first and last point of contact for customers.

Being able to combine my customer service and technical skills to deliver the entire client experience keeps my position interesting.





Member employer feature

# Norscan – committed to quality

Now led by President and CEO, Maurice Déquier, Norscan has been serving the fiber optic telecommunication industry for 40 years.

*Norscan Instruments Ltd. is a pioneer in the development of advanced cable monitoring systems and touchless locating for fiber optic cables.*



Norscan Instruments Ltd. is a pioneer in the development of cable monitoring and touchless locating systems for fiber optic cables. They have earned a reputation for developing and provided high-quality products and services for the North American telecommunications and broadband markets. Their office is located in the Terracon Business Park on Winnipeg's east side.

Their product offerings include touchless locating, cable monitoring and intelligent grounding. Services covered are remote cable monitoring and network management services.

### All about touchless cable locating

An average cable locate begins with the technician accessing the outside plant to set up the transmitter, then performing and marking the locate, and finally returning to the network access point to collect the transmitter and revert the network to its originally grounded condition.



Norscan employee performing a cable locate.

Touchless locating virtually eliminates this lengthy and manual process. Norscan installs a permanent transmitter at their clients' office/headend that can be remotely activated via a phone. With just one phone call, Norscan's touchless locating equipment places the locate signal on the cable and technicians are instantly able to locate using any standard receiver – no outside plant access required. Not only is this time saving but it also reduces locate costs.

### What is remote cable monitoring?

Norscan's cable monitoring equipment already helps their clients stay informed by monitoring their cable for damage. With their remote cable monitoring services, their clients receive an easy-to-read dashboard report with all the details

on the health and integrity of their network. As part of this service, the company also suggests the best corrective action while offering expert troubleshooting and maintenance support.

### Dashboarding

As with every industry, Norscan's clients are increasingly interested in new and emerging data from their infrastructure. Norscan's dashboards are attracting attention because of the unique nature of the data gathered. This interest in the aggregated data increases the demand for timely data and data visualization.



Norscan's dashboards provide timely and unique data.

### OSP management experts

With over 40 years serving the telecommunication and fiber optic industries they have a solid understanding of outside plant management (OSP). They strive to make their clients' OSP management approach as efficient and cost-effective as possible.

They have a team of strongly dedicated professionals who value a work-life balance. Norscan is ISO 9001:2015 Registered. A top employer, they provide a robust benefits plan, flexible work environment and are team focused. There are numerous opportunities to learn, grow and advance within the company.

Visit their [website](#) to find out more about Norscan or to contact them about any of their products or services.

Photos credit: Norscan Instruments Ltd.



# Hitting the green

Over 130 golfers played 18 holes on a fun and relaxing day

Always on par, teams teed-off at one of Manitoba's renowned courses — Kingswood Golf and Country Club, on a glorious summer day.

Held on Friday, June 23 in La Salle, Manitoba, golfers were able to connect and network with colleagues and individuals while enjoying a variety of activities and amenities, such as food and beverage services and the ability to win prizes.

In addition to the golf contest winners, there were random draws which included a 55-inch flat screen TV, gift cards for 529 Wellington, Bomber and Winnipeg Jet merchandise and other great prizes.

Thank you to Darren Wanless who was the emcee. Also, many thanks to the staff/volunteers who helped run the contests.

Here are the golf contest winners:

*Team with the best score*  
Team 16A — Justin Stanus, John Tenkula, Gerry Hebert and Myles Hadaller.

*Closest to the pin*  
Kevin Hiraoka and Christine Bruneau.

*Longest drive*  
Lucille Keesick and Ron Berard.

*Straightest drive*  
Jason Thompson.

*Putting contest*  
Ron Nerbas.

**Golfers generously donated over \$500 to KidSport Winnipeg.**



Continued on page 13.

# MEMBER NEWS



Continued from page 12.

## Generous donors and sponsors

Our lavish prize pool was built due to the generous donations from several companies. Thank you to our wonderful donors!

Below is a list of our elite group of sponsors who play a large part in the success of our event. Please support these generous companies when looking for specific services and help on projects.

Thank you to our sponsors and all those who participated in making our tournament a success.

### Keystone sponsor — Keystone Projects Ltd.



### Cart sponsor — Association of Consulting Engineering Companies Manitoba



### Hole sponsors

- Canadian Public Works Association Manitoba Chapter
- Crosier Kilgour & Partners Ltd.
- Heidelberg Materials
- KGS Group
- MacDon
- Penn co
- Pinchin
- Plenary
- Pro Engineering Inc.
- RRC Polytech
- Stantec
- Titan Environmental Containment
- Tri-Core Projects Ltd.
- Vector Construction Ltd.



Continued on page 14.

Continued from page 13.



# Skills Canada National Competition held

The competition promotes skilled trade and technology careers among Canadian youth.

*Each year, more than 550 competitors from all regions of Canada participate in over 40 skilled trade and technology competitions.*

The Skills Canada National Competition (SCNC) was held on May 25 and 26, 2023 at the RBC Convention Centre in Winnipeg.

Over 550 post-secondary and apprentice students from across Canada competed in 40 skilled trades and technology contests in industry sectors ranging from mechanical engineering technology, architectural technology and design, landscape gardening to robotics, fashion technology, automotive service and video production.

The next Skills Canada National Competition will be held in Quebec City, Quebec from May 30-31, 2024.

## Highlighting technology careers

The SCNC is an ideal way for tomorrow's workforce to discover new and exciting careers. The Skills Canada

National Competition is the only national, multi-trade and technology competition for students and apprentices in the country.

At SCNC, thousands of students visit the competition floor and discover the exciting and rewarding careers that are

available in the skilled trades and technologies through interactive *Try-A-Trade*® and Technology activities, by visiting exhibitor booths, and engaging with industry professionals.

This year, Skills/Compétences Canada brought three new initiatives to SCNC!

## New events held

First, they hosted a **NEW! Skills Symposium** where industry, government and education had the opportunity to meet, exchange and share knowledge. This year's theme was: *Embracing Adaptability: Navigating*



*Change in the Skilled Trades and Technologies.* Some of the topics presented included engaging diverse communities, recruiting and retention, sustainability and so much more!

Second, the **NEW! Skills Showcase** featuring First Nations, Inuit and Métis Skills. This showcase allowed thousands of visitors to explore First Nations, Inuit, and Métis skills by taking part in activities such as flat stitch beading, soapstone carving, building mini tipis and constructing Inuit yo-yos! It was shown how these skills align with different competition areas seen at the national competition, such as fashion technology and carpentry.



And lastly, the **NEW! Empowering Women in Trades** initiative brought together industry partners to show young women the incredible careers that are available in the skilled trades.

To view all the competition winners and to find out more about the competition and sign-up information, please visit the Skills Canada (Manitoba) [website](#).



Photos credits: Skills Canada (Manitoba)..



## Upgrade your skills

Enroll in RRC Polytech's water and wastewater operator and certification training

The Civil Engineering Technology department at RRC Polytech offers several short courses, workshops, and seminars to provide academic and professional development in the areas of architecture, infrastructure, construction, and the environment. The courses are intended to be practical and relevant to today's student and employee looking to upgrade their skills and knowledge in current technologies. More information can be found on the college's [website](#).

Here is a list of upcoming courses for fall 2023:

### ONLINE Water and Wastewater Foundations

Five-day course: August 28–September 1  
Course code: WATR-1007 and ID: 245611  
Fee: \$1,040  
*Registration deadline: August 18*

This introductory course covers the foundational skills and knowledge operators require for success when writing ABC certification exams. This course is recommended, but optional, prior to taking a Class 1 certification exam preparation course. Industry related Math and Science (chemistry, microbiology, hydraulics and electricity), Safety / Administration / Management, and Equipment / Support systems are all gone over in detail, relative to certification exam requirements.

### ONLINE Water Treatment I

Four-day course: September 11-14  
Course code: WATR-1032 and ID: 245609  
Fee: \$864  
*Registration deadline: August 25*

This course is intended for operator training and/or preparation for the Manitoba Water Treatment Class I Certification Exam. Topics include: A brief review of Foundations material, Hydrologic cycle, Ground water systems, Water quality parameters / guidelines and regulations, Conventional Treatment, Slow sand filtration, Fluoridation, Iron & Manganese removal, Scaling & Corrosion, Taste and Odor control, Disinfection / Chlorination, Testing / Sampling, and Water Treatment mathematical calculations.

### ONLINE Water Distribution I & II

Four-day course: September 18-21  
Course code: WATR-1010 and ID: 245607  
Fee: \$864  
*Registration deadline: September 1*

This course is intended for operator training and/or preparation for the Manitoba Water Distribution Class I or Class II Certification Exams. Topics include: A brief review of Foundations material, Hydrologic cycle, Ground water, Distribution system purpose / design, Piping / Trenching / Bedding, Scaling & Corrosion, Cathodic protection, Hydrants / Valves/Service connections / Meters, Cross connection / Backflow prevention, Chlorination, Testing / Sampling, & Water Distribution mathematical calculations.

### ONLINE Water Collection I & II

Four-day course: September 25-28  
Course code: WATR-1003 and ID: 245610  
Fee: \$864  
*Registration deadline: September 8*

This course is intended for operator training and/or preparation for the Manitoba Wastewater Collection Class I or Class II Certification Exams. Topics include: A brief review of foundations material, WW characteristics, Collection system purpose / design, Piping /Trenching / Bedding, Odor & Corrosion control, Manholes / Lift stations, Cross connection / Backflow prevention, Pipe inspection / cleaning / rehabilitation, Chlorination, Testing / Sampling, & Wastewater Collection mathematical calculations.

### ONLINE Wastewater Treatment I

Four-day course: October 3-6  
Course code: WATR-1031 and ID: 245622  
Fee: \$864  
*Registration deadline: September 15*

This course is intended for operator training and/or preparation for the Manitoba Wastewater Treatment Class I Certification Exam. Topics include: A brief review of Foundations material, WW characteristics / parameters / guidelines, Wastewater stabilization pond design & maintenance; Mechanical treatment processes, Sludge handling, Odour control, UV / Chlorination, Testing / Sampling, & Wastewater treatment mathematical calculations.

### ONLINE Water Treatment II

November date — TBA

### ONLINE Wastewater Treatment II

November date — TBA





# MET students start their engines at return of annual Stirling Engine Competition

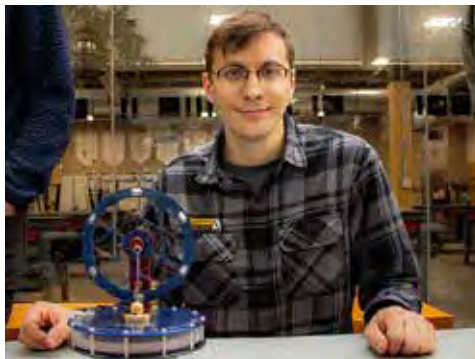


A Stirling engine is a heat engine that works on the basis of an external applied temperature difference. By maintaining a hot and cold temperature difference the engine is able to run and produce mechanical power.

**Competition heated up at** the end of April as the annual Mechanical Engineering Technology (MET) Stirling Engine Competition returned once again at RRC Polytech's Notre Dame Campus. The competition is the culmination of first-year MET students' hard work as they built their own Stirling engines from scratch during their *Basics of Manufacturing* course.

A Stirling engine works by converting heat energy into mechanical energy. The engine uses a temperature

differential between two surfaces — in this case, one surface is much colder than the other because of ice — to take advantage of the expansion and contraction of air, which helps move a piston. The engine was named after its inventor, Robert Stirling.



MET student Nik Graham with his Stirling Engine.

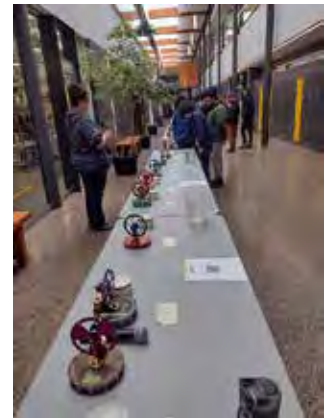
During the noon hour, the halls of the Skilled Trades and Technology Centre were lined with the student-built engines, running on nothing but the ambient temperature and ice.

The 2023 engines were judged on categories such as:

- Best Colour Scheme (winner: **Eduardo Romero**);
- Best Flywheel Design (winner: **Josh Harrison**);
- Fastest Engine (winner: **Tyler Cyr**) and
- Truest Flywheel (winner: **Nik Graham**).

"For a lot of people, this is really their first time getting their feet wet in this kind of an environment," Nik Graham, the winner of the Truest Flywheel distinction, said. "So this is more like a celebration, like, 'you did this, this is a machine that did not exist before you joined this class.'"

The competition is a fun celebration for the MET students and their hard work and dedication to complete their first year and provides them with the emotional boost to get through the exam period, according to their instructor, Serge Broeska, when he gave a speech to start the event.



MET student Nik Graham with his Stirling Engine.

This was the first Stirling Engine competition to return to RRC Polytech since 2019, after COVID-19 restrictions forced the College to pause the popular event.

Leon Fainstein, Serge's predecessor, started the annual event about two decades ago, and has been a MET tradition ever since.

If you are interested in contributing to the success of future Stirling Engine events by participating as a judge or sponsoring the event, please contact Aaron Brown, Chair of Mechanical Engineering Technology, at [ajbrown@rrc.ca](mailto:ajbrown@rrc.ca).

Article and photos are courtesy of RRC Polytech.

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# A+ for applied research projects

SENIOR ENVIRONMENTAL ENGINEERING TECHNOLOGY STUDENTS CELEBRATE COMPLETING THEIR ARP PRESENTATIONS ALONGSIDE THEIR COURSE INSTRUCTOR, ARMAN VAHEDI (FOURTH FROM RIGHT).

Article and photos are courtesy of RRC Polytech.

Spring can be an exciting time for students at RRC Polytech. It often means that courses are winding down and many students will be entering their work-integrated learning (co-op) term or graduating and setting their sights on the next step of their careers. For the senior Civil Engineering Technology students, it was all smiles as April means wrapping up the hard work of Applied Research Projects or “ARP” for short.

Students work in small groups to research, design and help solve problems in industry. Typically spanning over six months many groups work with various College and industry experts to determine project scope, testing methods and innovative solutions in a practical application. The 2023 year was particularly exciting as the College was back to in-person presentations and full use of testing facilities.

Kyrhie C., John C., John D. and Yllan L. spent their senior year researching Global Floodplain Mitigation Solutions to First Nation Reserves in Manitoba. Due to global warming, climactic patterns are changing regionally and increasing water levels are negatively affecting flood prone communities in Manitoba. This project focused on alternative short-term and long-term solutions to mitigate flooding and limit the loss and damage in low lying settlements adjacent to the Fisher River, specifically Peguis First Nation.

Riel C., Sunwoo H., and Vadim S. researched incorporating Crumb Rubber Aggregates into Concrete Pavement for Improved Durability Against Scaling. After noticing that concrete roads are susceptible to severe scaling and deterioration largely due to extreme freeze-thaw cycles and de-icing salts, this group explored options to add crumb rubber aggregates into the design of concrete pavement while still achieving concrete specifications. Their concrete

mixes were subjected to freeze-thaw cycles and submerged in de-icing salts to mimic the most extreme environments. After six months of hard work the study found that crumb rubber mixture can be an effective amendment to concrete mixes to mitigate scaling by increasing durability without compromising strength and is worth additional exploration.

The work conducted throughout the ARP builds upon collaboration, problem solving, work prioritization and communication skills that students can take with them into the workforce.

Industry partnerships are invaluable as some students find permanent work through their ARP connections or develop skills and knowledge above and beyond the College curriculum.

Kris Maranchuk, chair of Applied Research in Skilled Trades and Technology at the College has been one of the driving forces behind the continued success of ARP as he helps navigate industry needs, trends, and research requests.

If you are interested in APR collaboration with the College’s Engineering Technology programs, please contact Kris Maranchuk at [kmaranchuk@rrc.ca](mailto:kmaranchuk@rrc.ca).



Vadim (left), Riel (middle), Sunwoo (right), working on one of their many concrete batches for ARP.

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### The outward visible symbol

of certification in the profession is our CTTAM professional ring.

The sterling silver band features a repeating pattern of five gears bracketed by a maple leaf on each side.

The technology ring represents the union between the member, CTTAM and fellow members.

It may be worn according to your preference but professional rings are traditionally worn on the pinky finger. The maple leaf design was chosen

to reflect our country and make it more likable by members across Canada.

The gears represent the five members of an engineering team:

- Trades person;
- Technicians;
- Technologists;
- Engineers and
- Scientists.

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You will have to book an appointment to try on and pickup any ring orders.

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Articles, suggestions or constructive criticism regarding this publication, the Association, or other matters of interest to Engineering and Applied Science Technicians and Technologists should be sent to the CTTAM office.



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### Office hours

We are open from 8 am to 4 pm, Monday to Thursday and from 8 am to noon on Fridays until after September 4.  
*Appointments are required to meet CTTAM staff in person*

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