

# CWSE-Prairies Newsletter

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*The goal of the  
NSERC CWSE – Prairies*

*is to develop and successfully lead  
strategic activities that promote  
greater opportunities for women,  
particularly Aboriginal women, in  
science and engineering across the  
Prairie Region.*



## **Celebration of the International Day of the Girl**

The Prairies NSERC CWSE collaborated with the Manitoba Status of Women of the Government of Manitoba to host a special event in celebration of the International Day of the Girl. The event enabled thirty high school girls from across the Province of Manitoba to explore the fields of science, technology, engineering and math (STEM) and meet women role models working in these areas. The role models were professors from the University of Manitoba, the University of Winnipeg and Brandon University. The youth met with the role models on October 16, 2015 at the Manitoba Legislative Building, and at the University of Manitoba and University of Winnipeg campuses where they toured STEM laboratories and learned about research projects, opportunities and impacts.

The day started at the Legislative Building with interactive research displays by some of Manitoba's top researchers in STEM, including the research of Prairies CWSE, Dr. Annemieke Farenhorst. Speakers to initiate the event included Dr. Melanie Martin from the University of Winnipeg, Family Services Minister Kerri Irvin-Ross, and Dr. Gervan Fearon, President of Brandon University. The students then had opportunities to interact with researchers and ask them questions about their work and the academic programs available at their universities.

The youth traveled to the University of Manitoba for a tour and joined 70 women in STEM for lunch during which Dr. Stefi Baum, Dean of the Faculty of Science, spoke to the girls about her career as a scientist. As part of the luncheon, the girls participated in a Speed Mentoring session with the university faculty and students. This was a great chance for the girls to hear first-hand experiences of what it is like to have a career in STEM, and to see all the different paths that people take to get where they are today.

The day ended with tours of STEM laboratories at the University of Winnipeg and additional interactions with university professors and students in STEM.

Thank you to everyone who made this event a big success!



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## Engineers Geoscientists Manitoba CIPWIE Mentorship Program

The Committee for Increasing the Participation of Women in Engineering (CIPWIE) of Engineers Geoscientists Manitoba has set up a mentoring program to provide female engineering students with an opportunity to connect with a female professional engineer through structured events and programming. The mentorship program has 35 students and 33 licensed female engineers and is designed with the 30 by 30 goal in mind – the commitment to raising the percentage of newly licensed engineers that are women to 30% by the year 2030. 30 by 30 is a national goal that is endorsed by both Engineers Geoscientists Manitoba and The University of Manitoba.

During the 2015-2016 academic year, four CIPWIE Mentorship Program events are held, including the networking event held on November 26, 2015 that was co-hosted by the Prairies CWSE program. This event allowed students to meet with industry professionals and contribute to a panel discussion led by Ralph Kurth, President at Teshmont Consultants LP, Lesley McFarlane, President at Engineers Geoscientists Manitoba, Brittany Dupont, Structural Engineer in Training (E.I.T) at Tetra Tech, and Elle Nadeau, instructor in the Civil Engineering Technology and Construction Management Degree Program at Red River College.



Congratulations to Committee for Increasing the Participation of Women in Engineering for making a positive impact on student success in networking. Great work CIPWIE!

## Dr. Farenhorst and her CWSE-Prairies program earn prestigious award



The Dr. and Mrs. Ralph Campbell Award is awarded to staff members who have provided outstanding service in outreach activities, given their own time and demonstrated a personal

commitment to people and communities around them. This year's award was presented to Prairies CWSE, Dr. Annemieke Farenhorst at the University of Manitoba this past November.

*"Annemieke Farenhorst, Faculty of Agricultural and Food Sciences, was recognized for her tireless efforts in encouraging and empowering women to enter careers in the sciences and engineering. Farenhorst's workshops and conferences to educate and build support networks have reached hundreds of participants. She has also partnered with other universities and the Assembly of First Nations in the NSERC CREATE H2O program where First Nations science and engineering students will be at the forefront of tackling water services gaps in their communities."*

-quote from the UM Today News feature on the award. Read the whole feature, here: <http://news.umanitoba.ca/faculty-and-staff-recognized-for-community-involvement/>.

Congratulations Dr. Farenhorst!

## Engineering IS For Girls

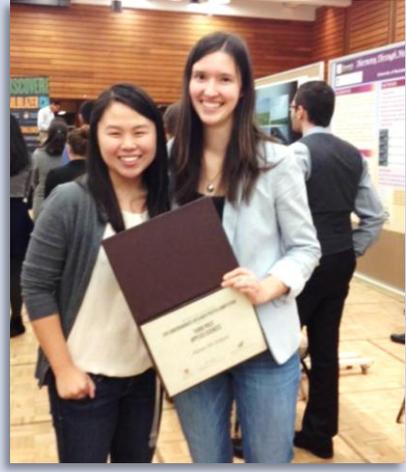
The Faculty of Engineering, with the help of WISE Kid-Netic Energy team including Lena Yusim, hosted the 5th annual Engineering IS for Girls event in November 2016. The event provided an exciting opportunity for grade 9-11 girls from various high schools in Manitoba to spend quality time in the Faculty of Engineering and give youth a chance to imagine themselves as future engineering students. The youth participated in hands-on team projects, similar to what they would see in a first year Engineering Design course. The participants also met the Dean of Engineering, Dr. Jonathan Beddoes, and many current engineering students at the University of Manitoba, as well as engineering graduates who are making a difference in the world as professional engineers. As in previous years, the event reached its maximum capacity of 100 participants.

Great job to everyone who participated and helped out at this year's event!



# CREATE H2O students are winners in the University of Manitoba Undergraduate Research Poster Competition

Alexa McAdam and Monica Mai enrolled in the CREATE H2O program as undergraduate students and were provided with an opportunity to collaborate with First Nations communities in monitoring drinking water quality from taps in homes. As part of this collaborative work, they set out to test a range of analytical methods for determining bacterial levels in water. The students' innovation and hard work was awarded with the third place in the Applied Sciences category in the University of Manitoba Undergraduate Research Poster Competition. Congratulations and great work Alexa and Monica!



CWSE Prairies program coordinator Lena Yusim (LY) connected with Alexa McAdam (AM) and Monica Mai (MM) to talk about their research experience and the CREATE H2O Program.

**LY:** What was your research project about?

**AM:** Monica and I primarily worked on a project that looked at different methods used to analyze water samples for microbial contamination. We compared the methods for their accuracy, precision and costs in collecting data. For our comparison, we used ultra-pure water that was spiked with bacteria in the laboratory, but also collected water samples in the environment to compare the methods. Our work is important because the method selected varies by stakeholder, according to human, financial and infrastructural resources available and hence we needed to investigate how data obtained by different methodologies can be compared.

**LY:** How did you find out about the CREATE H2O program and what have been the opportunities it provided to you?

**MM:** In the CREATE H2O program, I had the opportunity to attend social, academic and cultural events and to meet with many people from different backgrounds, including learning from First Nations community members, University professors and activists. I was able to learn about the many issues First Nation communities are facing.

**AM:** I learnt about the CREATE H2O program through one of my professors, Dr. Ayush Kumar, who was teaching a course in microbial diseases. I was interested in the program and he got me connected! The most valuable experience was for me to learn about First Nations perspectives on water quality, this wisdom and knowledge really challenged me to broaden the way I think about and understand water quality issues. Off course, the project also provided me with a scientific experience whereby I learned new technical skills and, through our project, we discovered that different methods produce very similar results.

**LY:** Are you continuing this kind of work currently or in the future?

**MM:** I really enjoyed working with Annemieke this past summer. It was a rewarding experience being part of a program that combines both scientific research and Indigenous theory. I would like to continue to learn more about First Nations issues and involved in research in the future.

**AM:** I really enjoyed my summer with Annemieke, she works with lots of passion and integrity and it was really inspiring to work with her! I am interested in continuing to learn about First Nations perspectives, particularly as they relate to human health. □

## 2015 International Festival of Science, Technology, Engineering and Mathematics

The International Festival of Science, Technology, Engineering and Mathematics (STEMfest) is a weeklong event to allow teachers and other professionals to share ideas while discussing the future of STEM education and outreach. Dr. Annemieke Farenhorst was invited to participate in the Inspiring Girls in STEM Forum on September 30th, 2015. Dr. Farenhorst presented on "What we should know about the Fantastic Voyage and need for change" and participated as a panellist in a discussion how to strengthen opportunities for the participation of women in STEM fields. STEMfest took place in Saskatoon, Saskatchewan from September 27th to October 3rd, 2015 and was host to a grand total of over 8,000 attendees.



## WISE Kid-Netic Energy Girls Club – a continued success



The WISE Kid-Netic Energy Girls Club is designed to provide a small number of girls with weekly experiences to learn more about science and engineering research and connect them with a network of people and opportunities. Building on its success in 2014/2015, resources enabled to double the youth enrolment to 19 participants in 2015/2016. Completed and planned activities include a field trip to Manitoba's unique Oak Hammock Marsh Interpretive Centre, a series of computer programming workshops with Lego Mindstorms, a biology lesson in frog dissections, opportunities to become a vermicomposting expert through the Manitoba Green Action Centre, as well as participating in the spaghetti bridge competition hosted by Engineers Geoscientists Manitoba.

If you know girls who love to learn more about science while making new friends and having fun, this club is for them! While being enrolled, they will find women role models who can highlight how science is being used in our society and how women contribute to these achievements. Make sure and get the girl in your life into this club next year!

## Amazing Agriculture Adventure

The Amazing Agriculture Adventure was held on September 17, 2015 and is a 3 day-long event hosted by Agriculture in the Classroom. Throughout the day, Grades 4 and 5 students move through interactive stations at Richardson's Kelburn Farm, University of Manitoba's Glenlea Research Farm, and University of Manitoba's Farm and Food Discovery Centre. The stations are science curriculum based and focus on topics such as Habitats and Communities; Rocks, Minerals and Erosion; Maintaining a Healthy Body; Properties of and Changes in Substances; and Weather, Forces and Simple Machines.

This year, more than 900 youth attended the event over the 3 days. The event was made possible through the contribution of 150 volunteers from a wide range of sectors, including agricultural producers and industries, University of Manitoba and our own CWSE Program Coordinator Lena Yusim.



Thank you Lena for volunteering as an Agriculture Ambassador at the Amazing Agriculture Adventure!

Congratulations to all the organizers who helped put this event together!

## The CWSE - Prairies Team



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