

FEB 14-16, 2023
AGENTS OF CHANGE IN A NEW ERA
 VIRTUAL CONFERENCE PROGRAM



Day 1: February 14, 2023

10:30 Word of welcome and Land Acknowledgement

11:00 - 12:00

Building Confidence in Youth through STEM

- Melisa Yestrau, Network Member and Leadership Development Coach, Actua
- Braedon Aujla, Senior Speaker, Jack.org
- Ann Farrell, Assistant Professor, Department of Child and Youth Studies, Brock University
- Carly Renaud, Manager, Indigenous Research and Development, First Peoples Centre

The past few years have been the most challenging years many of us have ever faced. From school closures to hybrid working arrangements and social distancing, the COVID-19 pandemic has profoundly impacted all of us. Not surprisingly, youth have been among the most vulnerable to these unpredictable societal shifts. Numerous studies now highlight the severe and adverse effects of the pandemic on youth's academic and social development, most notably, the sharp increases in rates of depression, anxiety, loneliness, and suicide attempts among youth. Seventy percent of

adolescents surveyed by SickKids reported clinically significant depressive symptoms during the second wave (February to March 2021). There was also a considerable spike in youth eating disorders, with McMaster Children's Hospital reporting a 90% spike in referrals to its eating disorder program.

This panel will bring together industry, educators and health scientists to discuss the impacts of the pandemic on youths' mental health and well-being and the impact this may have on their longer-term academic and social success and society at large. Together we'll highlight the importance of supporting youth mental health, specifically among diverse population groups, to encourage their participation in STEM outreach programs and discuss the role of STEM, namely science and technology, in helping youth. This panel highlights the critical importance of prioritizing youth mental health through STEM outreach and education to reflect the changes brought about by the COVID-19 pandemic and to ensure we continue to break down barriers to support youth in pursuing STEM education and careers. The future of Canadian STEM relies on our ability to equip youth with the skills and confidence to feel prepared and willing to take on the challenges of tomorrow.

Followed by open networking on the STAN Zoom account

13:00-13:30

Annual General Meeting

If you are an active member of STAN, your presence is requested to help move forward the STAN agenda.

13:30 - 15:00

BIPOC in STEM spaces - How do we build a more inclusive space for us?

Helen Yip, she/her, WISEST Outreach Coordinator

*This session is dedicated to those who identify as racialized/BIPOC. If you do not identify with these groups, we kindly ask that you do not attend this session.

Do you identify as being BIPOC (Black, Indigenous, or Person of Colour)/ racialized? We're inviting participants to join us for a roundtable discussion on your perspectives and lived experiences as it relates to pursuing a career in STEM. In an effort to better understand the needs and barriers that racialized communities face, experiences shared will be used to inform the ongoing work that WISEST and Action for Healthy Communities are doing in partnership to encourage female newcomers to Canada to know that STEM is a viable career path, as well as be shared out with organizations who currently work with or intend to work with this demographic. This information will be individually anonymous.

If you identify as a BIPOC/racialized individual, we invite you to share your voice as part of this conversational focus group. The chat is meant to be a free-flowing session, however, there will be a moderator to help facilitate the discussion. This session is presented by WISEST (Women in Scholarship, Engineering, Science and Technology), an organization based at the University of Alberta, which exists to advance diversity while empowering women in STEM fields. WISEST achieves this vision by promoting the participation of underrepresented groups which includes young women, gender-diverse folks, 2SLGBTQ+, rural, Black, Indigenous and students of colour.

15:00 – 15:45

Keynote : The critical role of science literacy and effective communication in our “Anthropocene” world

John P. Smol, OC, PhD, FRSC, FRS., Distinguished University Professor, and Past President, Academy of Science, Royal Society of Canada

Science plays an increasingly important role in peoples’ lives. Yet, science, at the very least, is being under-used by politicians, policymakers, and the public-at-large. At worst, science is being misrepresented. Scientists must address these issues and provide information transfer in effective ways.

Day 2: February 15, 2023

10:30 Check-in | Coffee & Open Chat

11:00 – 12:15

New Opportunities from New Tech

Dr. Poh Tan, PhD student, Faculty of Education, Educational Theory and Practice stream
Mr. Dennis Chen, Youth Programs Manager, Vancouver Botanical Gardens Association
Greg Frank, Founder, E2 Adventures
Mr. Tom Cummins, Director of the Exhibits Department at Science World
Jae Williams, National Education Coordinator, Canadian Ocean Literacy Coalition
Jacques Gautreau

What can cutting edge tech bring to STEM outreach projects?

Hear about three projects that use tech to extend the reach or depth of STEM public education. Join Dr. Poh Tan from SFU; Gregory Frank from E2 Adventures; and the collaborative team of Jae Williams from the Canadian Ocean Literacy Coalition and Jacques Gautreau from the National Film Board of Canada, as we chat about the affordances and challenges that new technology offers, as well as learning about partnerships and collaboration possibilities.

Followed by open networking on the STAN Zoom account

13:00-14:00

Decentering Dominant Narratives and Practices in Science Education: A reflective and collaborative journey.

Dr. Poh Tan, PhD student, Faculty of Education
Ms. Ashley Edwards, Indigenous Initiatives and Instruction Librarian

In this fireside chat, we will engage in interactive dialogue and conversation about the importance of decolonial approaches and practices in science education. Teaching and learning is a dynamic and iterative process and historically, science teaching has stemmed from one dominant way of teaching and this includes transmission, rote memorization, and a commitment to achieve pure objectivity on what is being taught. As we shift into a space where science has moved from scientific knowledge to application and critical skills, it is also pertinent to understand the importance of decolonizing science in formal and non-formal learning. In this session, Ashley Edwards and Poh Tan will share their collaborative journey into understanding what decolonized science teaching and learning look and feel like and why decolonial work always starts with the self. We will discuss and share ideas on how

educators and scientists can begin to think about to take first steps towards decolonial work within the STEM space.

Followed by open networking on the STAN Zoom account

14:00-14:30

Networking: Meet Your Fellow STAN Members

Lead and Moderated by STAN Board

After briefly laying down the ground rules, we will be shuffling participants into small breakout groups of about 3 or 4 people. You will have about 5 minutes to introduce yourselves and what brings you to the Conference and exchange information before we reshuffle you into new rooms, with new people. Later, you can reconnect with your peers on the STAN Conference Slack channels, or catch up in one of the mini networking sessions following our presentations.

Join Slack!

Chat with other delegates at the Conference

https://join.slack.com/t/stanrst/shared_invite/zt-li1e3alj-UKzTwabGGyhVUDaNmCx4Bg

Day 3: February 16, 2023

10:30 Check-in | Coffee & Open Chat

11:00 -12:15

Paddling together: Approaching the spectrum of science communication as a series of streams

Shelagh Pyper, Director of Education and Outreach, Fuse Consulting Ltd
Sonya Odsen, Ecologist and Science Communicator, Fuse Consulting Ltd

What do a researcher publishing their research and a schoolchild looking for bugs in a pond have in common? Both activities fall along the spectrum of science communication – yet in many other ways, they are wildly different. A challenge that we as science communicators often face is determining where a project lands on this spectrum, selecting an appropriate approach, and effectively communicating these decisions to our clients and/or collaborators.

Shelagh Pyper and Sonya Odsen are science communicators that have worked on projects across the spectrum of science communication, most often (but not exclusively) within the fields of environmental conservation and sustainability. To begin the session, they will present a model of science communication that divides it into four streams – education and outreach, research mobilization, multi-stakeholder initiatives and operational implementation – that flow from the glacier of science and connect it to the ocean of practice. They will describe how this metaphor has helped their group identify the unique approaches and tools appropriate to the four streams, and the challenges that arise when projects begin to drift into a different stream.

Participants will be invited to share how they do or do not see their work reflected in the metaphor, what unique tools they employ depending on which stream they are working in, and examples of times when a project drifted across streams – what happened then? Through this discussion the group will learn about each other's approaches, audiences, and unique perspectives on science communication as informed by their experiences. The session will conclude with a synthesis of emerging themes and new learnings by Shelagh and Sonya, and an invitation for final thoughts, questions, and reflection from the participants.

Shelagh and Sonya are committed to creating a safe space for discussion, with particular attention to creating an environment of safety and trust for BIPOC, LGBTQ2S+ and participants with disabilities. We deeply value the importance of hearing perspectives from people from a wide range of backgrounds and experiences. No participant will be singled out to speak to their lived experience because of their identity, but all participants will be welcome to share their stories if they so choose. If you require specific accommodations please contact Shelagh, Sonya, and the STAN Conference organizers so that we can work together to ensure you are able to participate fully.

Followed by open networking on the STAN Zoom account

Aligning Indigenous Voices and STEM

Janelle Fournier, Manager of Education

Noreen Demeria, Kwe/Ikwe, Manager, National Indigenous Youth in STEM (InSTEM) Program

Abbey Ramdeo, She/Her/Elle, Specialist, Equity, Diversity and Inclusive Education

Historically, Indigenous perspectives have been removed from Canadian schools and workplaces, particularly in STEM (Science, Technology, Engineering, and Math). Actua will facilitate a working session where participants will analyze their own settings and brainstorm through scaffolded reflection questions on how to respectfully and purposefully include Indigenous voices into their workplaces and educational settings. This session is built on a collection of lessons Actua has learned in engaging Indigenous youth in STEM through Indigenous community-driven for-credit land camp programs. Please note that Actua is not representing itself as an authority on Indigenous learning.

Closing Remarks

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