



Conference

Season in Review 2022-23

Introduction

For over 60 years, Science Atlantic has welcomed thousands of faculty and students to annual academic student conferences. Conferences are essential for supporting students and faculty in the region by providing opportunities to explore fields of interest, showcase regional research, listen to inspiring speakers, present their research, and take part in valuable networking, contributing to the growth and development of the scientific community in the region.

Conference Attendance

The 2022-2023 conference season marked the long-awaited return of in-person attendance for the majority of conferences, after having moved online during the pandemic. Attendees convened at eight conferences covering 10 scientific disciplines:

Aquaculture & Fisheries and Biology
Conference (AFB) hosted by the
University of New Brunswick, Saint John

Science Atlantic Environment
Conference (SAEC) hosted by
Grenfell Campus, Memorial University

Atlantic Universities Geoscience
Conference (AUGC) hosted by
Acadia University

Mathematics, Statistics, and Computer Science
Conference (MSCS) hosted by Mount Allison
University

Atlantic Undergraduate Physics and Astronomy
Conference (AUPAC) hosted by
Saint Mary's University

Science Atlantic Nutrition and Foods
Conference (SANFC) hosted by the
University of Prince Edward Island

ChemCon hosted by
Dalhousie University

Psychology Conference hosted by
Mount Saint Vincent University

These conferences were a great success and brought together approximately 900 attendees to promote education, research, and science in the Atlantic provinces.



2023 Year in Review



900 Attendees



18 Keynote Speakers



86 Awards



2 Academic Competitions

Conference Highlights

Forty Years and Counting at the Atlantic Universities Geoscience Conference

Faculty advisor Dr. Sandra Barr attended her first AUGC in 1966 as an undergraduate student and has since participated in over 40 AUGC conferences, including as a faculty advisor for eight. She says:

The AUGC is a great learning experience for students, especially those involved in the organization of the conference. For student presenters, it is likely their first experience presenting a scientific research paper and all benefit from the opportunity and feedback. For students who just participate, it is typically their first experience at a scientific conference, and often opens their eyes to the importance of networking and meeting their peers from other universities.

In my experience, AUGC is an exceptionally successful model for an undergraduate student conference.

Dr. Sandra Barr
AUGC 2022 Faculty Advisor
Acadia University



Student organizers with Dr. Sandra Barr (3rd from right) and Dr. Mo Snyder (far right) at AUGC 2022

New Attendees at the 2023 Psychology Conference

The 2022-2023 conference season brought hundreds of students and faculty together. One of our bigger events this year was hosted by Mount Saint Vincent University: 190 delegates made this year's Psychology Conference the largest to date.

As well, conference organizers and the members of the Science Atlantic Psychology Division were pleased to welcome participants for the first time from Science Atlantic's newest member institutions, Nova Scotia Community College and Université Sainte-Anne.

Attending my first Science Atlantic Psychology Conference at MSVU was an exciting experience of insightful presentations, discussions and networking.

The conference provided a valuable opportunity for knowledge exchange and fostering connections between my work and the psychology community. I will use insights gained from this conference in my teaching work.

Scott Furlotte, MSc
Faculty, School of Health and Human Services
Nova Scotia Community College



Student Research Presentations

Central to our conferences are student presentations. Through poster and oral presentations, students have the opportunity to showcase their research through poster and oral presentations.

The 2022-2023 conference season hosted a record-breaking total of 407 student presentations, a remarkable 49% increase over the previous year.

During the 2023 conference season, 86 awards were presented. These academic awards recognize the outstanding scientific research happening in Atlantic Canada's scientific community. More about this year's conference award winners and their abstracts can be found in the 2022-2023 Science Atlantic Student Awards Yearbook.

I was delighted to attend ChemCon in Atlantic Canada, where I had the pleasure of immersing myself in the chemistry community and connecting with fellow enthusiasts in the field.

Winning the award for the best oral presentation in undergraduate material chemistry was truly inspiring, as it showcased the recognition and interest my research generated. Additionally, discovering advancements in teaching chemistry and exploring the diverse research of others left a lasting impact on me.

Mark Mikhail

ChemCon 2023 CIC Undergraduate Award in Material Chemistry (Oral), Winner
Dalhousie University



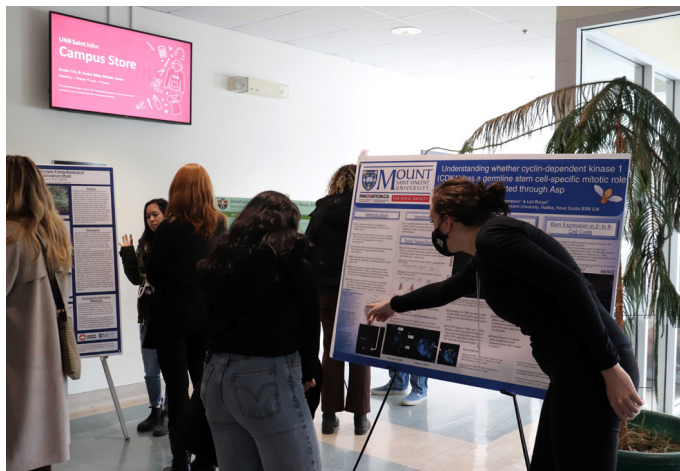
More Ways to Learn

Science Atlantic conferences provide more than keynote speakers and student presentation opportunities. For example, students attending AUPAC are making connections with industry representatives, faculty, and other students at a more friendly competition level: the AUPAC Cup. This year's AUPAC Cup included various games, quizzes, and even plane building! According to faculty advisor Dr. Vincent Hénault-Brunet (Saint Mary's University), the AUPAC Cup mixes students from different post-secondary institutions which "is a great way for students to network and socialize."



Conference Delivery

Over the past year, conference attendees once again had the opportunity to interact face-to-face with each other to create meaningful connections. Organizers noted that students appreciated being able to see their peers again in person, highlighting the sense of community felt by attendees. The return to meeting together generated an energetic atmosphere with live keynote speeches, engaging presentations, and direct interaction with researchers and their findings. Having in-person connections at the conferences allowed for professional networking as well as informal social activities which strengthen relationships and the Atlantic science community as a whole.



"The Science Atlantic conference was such a great opportunity to connect with others with similar research interests and learn about new research as well! Overall it was a great experience and I learned a lot."

Ashley Chiasson
AFB Conference Attendee
Dalhousie University



AFB 2023 - University of
New Brunswick, Saint John

The use of commercial academic conference registration platforms was explored by several organizing teams, with positive results and recommendations for future organizers. In particular, Fourwaves was used by four teams. Psychology conference organizer Donna Thompson (MSVU) reported, "Our undergraduate student research conference was tremendously successful. Fourwaves played a key role in our success. A terrific product." SAEC organizers also praised Fourwaves software, and highly recommended its use for future conferences.

Overcoming Delivery Challenges

As noted, the 2022-2023 conference season saw most conferences return to in-person opportunities. However, for SANFC, hosted by UPEI, and SAEC, hosted by Memorial University of Newfoundland, Grenfell Campus, a virtual conference provided relief for organizers. This conference season, organizers of SANFC and SAEC faced challenges planning in-person events due to labour disruptions and low in-person registration numbers. Impressively, the organizers were able to pivot and host successful virtual conferences with short notice which still included excellent student presentations, interesting keynote speakers, and important community building opportunities.

Benefits of hosting conferences online include the elimination of geographical and financial limitations. Having a virtual meeting space allows participants, presenters, and speakers from across Atlantic Canada to access the conference from their location without needing to plan for costs and time of travel. This allows conferences to be more financially and physically accessible, which, for SAEC and SANFC this year, significantly increased conference attendance. Both virtual conferences also saw a decrease in expenses and now have a financial surplus to support future events.



Organizers of the SANFC conference praised the virtual platform Gather which provided a novel way for attendees to connect online.

In their final report, SANFC student organizers were appreciative of the support received from Science Atlantic. “Cindy [Smith] and Lois [Whitehead] were the most important supports for organizers. When we were faced with a change to an online platform, and recovering from a long strike, it was extremely helpful to talk to them about what could work, and possible pitfalls. Cindy’s calm presence and technical knowledge were invaluable. She put a lot of creativity and work into the Gather platform.”

Student Organizers

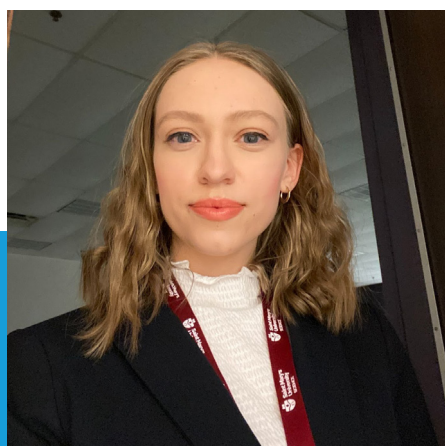
Science Atlantic conferences offer a unique experience to students who want to help organize a conference. Dr. Jennifer Taylor works alongside her students to organize the Nutrition and Foods Conference when it is hosted at UPEI. She says: “One way that we involve students in a meaningful way is to provide academic credit for their contributions to planning the conference through our Community Nutrition course.” In exchange for a great life experience and course credit, students are able to participate in the organization of the SANFC conference.

Organizing a conference is a great opportunity for students to get involved and learn important skills. Katherine Myers, a physics student at Saint Mary’s University and lead student organizer for AUPAC 2023, found the conference and the opportunity to create the event a “fantastic experience.”

Student presentations and keynotes alike were a fantastic experience for me to learn more and share astronomy and physics knowledge around Atlantic Canada.

The connections I made and experience I gained during this volunteer position will no doubt benefit me for years to come, and for that I am very grateful.

Katherine Myers
AUPAC 2023 Student Organizer



Keynote Speakers

Science Atlantic is grateful to the 18 distinguished keynote speakers who generously shared their expertise and presented their research to conference attendees.

Dr. Steven Backman is an Aquaculture Veterinarian and Product Manager at Skretting North America East, and President of Magellan Aqua Farms Inc. As well, he is the Charter President of the Canadian Association of Aquatic Veterinarians and Charter Secretary of the Eastern Association of Aquaculture Veterinarians. Dr. Backman spoke on The Future of Aquaculture in Canada: Developing Recirculating Aquaculture Systems (RAS) and Diversifying into Invertebrates and Seaweeds. (AFB)

Dr. Lisa Barrett (Dalhousie University) is an Infectious Diseases Clinician Scientist with the Nova Scotia Health Authority and an assistant professor in the Divisions of Infectious Diseases, Microbiology, and Immunology, and Laboratory Medicine and Pathology at Dalhousie University. Her research involves laboratory-based discovery science, clinical research, and implementation science in public health systems with a focus on pragmatic design. Dr. Barrett spoke on The COVID Crisis: Realtime Lessons in Communication, Empowerment, and Health Ownership. (Psych)

Dr. Sukhinder Kaur Cheema is a professor of Biochemistry at Memorial University of Newfoundland. She held the CIHR New Investigator Award (2001-2006) along with various other awards and has served on the Advisory Board for the CIHR Institute of Nutrition, Metabolism, and Diabetes. Currently, she is the Vice-President (Research), and President-Elect of the Canadian Nutrition Society. Dr. Kaur Cheema discussed Maternal Nutrition and Future Generational Health. (SANFC)

Dr. Nola Etkin is the Dean of Science and a professor of chemistry at University of Prince Edward Island. Her research interests include the preparation of new types of metal-containing compounds that can be used as catalysts for industrial processes, such as the making of plastics. Her research focuses on specialty application plastics. Dr. Etkin spoke on A Decade of Discovery as a Mi'Kmaq Chemist. (ChemCon)

Dr. Ruth Harvie is an assistant professor in the Department of Human Nutrition at St. Francis Xavier University and a recipient of the Research Nova Scotia New Health Investigator Award. She has ten years of clinical experience as a dietitian in New Zealand and has spent time at the

Canadian Centre for the Human Microbiome and Probiotics in London, Ontario. Dr. Harvie spoke on Using the Gastrointestinal Microbiome to Personalize Nutrition Advice: Are We There Yet? (SANFC)

Dr. Kevin Hewitt (Dalhousie University) is a professor in the Department of Physics and Atmospheric Science, Associate Dean of Equity and Inclusion in the Faculty of Science, and was previously a Chair of Senate for Dalhousie University. His research involves molecular imaging, including developing novel nano particles probes for bioimaging and treatment and optical imaging for a variety of medical applications. Dr. Hewitt is passionate about connecting physics to the everyday lives of students. His talk was entitled Social Justice and My Work as a Physicist. (AUPAC)

Dr. Julie Hlavacek-Larrondo (Université de Montréal) is a Canada Research Chair in Observational Astrophysics of Black Holes and an associate professor of physics. She is an internationally renowned expert on massive black holes and has released over sixty papers. Dr. Hlavacek-Larrondo's talk was entitled What is Invisible, But Can Be Seen? What Seems Unfathomable, But Which We Manage to Uncover? What is Infinitely Small, But Can Impact the Infinitely Large? (AUPAC)

Dr. P. T. Jayachandran (University of New Brunswick) is the principal investigator of the Canadian High Arctic Ionospheric Network—a ground-based network of Global Navigation Satellite System Receivers and High-Frequency (HF Radars) - and a professor of physics. His research involves the physics of solar-terrestrial interaction and the development of radio remote sensing techniques. Dr. Jayachandran spoke about Monitoring the Arctic Ionosphere - Research and Applications. (AUPAC)

Dr. Jude Kong (York University) is a professor in York's Mathematics and Statistics Department and the founding Director of the Africa-Canada Artificial Intelligence and Data Innovation Consortium. He is an expert in mathematical modeling, artificial intelligence, infectious disease modeling, and mathematics education. Dr. Kong spoke on Harnessing the Power of Mathematical Models to Inform Disease Outbreak Policies. (MSCS)

Dr. Nicolas Lecomte (Université de Moncton) is a Canada Research Chair in Polar and Boreal Ecology. His research involves understanding the impact of climate changes on ecosystems and animal populations, with a focus on migratory birds and their predators in polar areas. Dr. Lecomte

spoke on Tracking Climate Change in Polar Ecosystems. (AFB)

Dr. Catherine L. Mah (Dalhousie University) is a Canada Research Chair in Promoting Healthy Populations. She is an internationally recognized scholar in nutrition and food policy and has been appointed to Health Canada's Nutrition Science Advisory Committee. Dr. Mah spoke on Consumer Food Environments, Healthy Diets, and a Healthier Society: An Introduction to Food Environments Research From a Social Perspective. (SANFC)

Dr. Marcin Sawicki (Saint Mary's University) is a Canada Research Chair (Tier 1) and a professor of Astronomy. His research focuses on how galaxies are formed and developed over time. Dr. Sawicki has served on advisory panels for NASA, the National Science Foundation, and major international astronomical observatories. He is a core member of the NIRISS science team (the made in Canada instrument on the Webb telescope) and is excited to be using the Webb telescope. Dr. Sawicki spoke on The James Webb Space Telescope. (AUPAC)

Dr. Peter Selinger (Dalhousie University) is a professor of Mathematics and Computer Science. His research interests include semantics of quantum programming languages, the theory of quantum circuits, and combinatorial game theory. Dr. Selinger spoke on Hex as a Combinatorial Game. (MSCS)

Dr. Amber Simpson (Queen's University) is a Canada Research Chair in Biomedical Computing and Informatics and an associate professor in both the Department of Biomedical and Molecular Sciences and the School of Computing. Her research is specialized in biomedical data science with a focus on developing novel computational strategies for improving human health. Dr. Simpson spoke on Solving Fundamental Cancer Problems with AI. (MSCS)

Carla Skinner is an accredited geologist and Physical Scientist at Natural Resources Canada, Geological Survey of Canada (Atlantic). She spoke on IDEA for Early Careers. (AUGC)

Dr. Alex J. Veinot (Western University) is a Banting Postdoctoral Fellow in the Ragogna group. His research involves main group, organic, and surface chemistry, 2D and 3D self-assembly, and N-heterocyclic carbenes. Dr. Veinot spoke about Amplifying Perspectives, Empowering Excellence: The Black Student Experience in Chemical Sciences. (ChemCon)

Dr. Manuella Vinciter (Carleton University) is a Canadian Research Professor of Physics and a Fellow of the Royal Society of Canada. Her research focuses on the ATLAS experiment at the CERN Laboratory located in Geneva, Switzerland. The results of the ATLAS experiment help explain fundamental physics questions such as the existence of dark matter in the universe and the origins of mass. Her talk was entitled Exploring the Infinitesimal to the Infinite with the ATLAS Experiment. (AUPAC)

Dr. Russell Wyeth (St. Francis Xavier University) is a professor in the Centre for Biofouling Research and Department of Biology. His research interests include invertebrate neuroethology, behaviour, and neurobiology, as well as confocal microscopy, electrophysiology, and mathematical modeling. Dr. Wyeth spoke on Foolish Goal or Foul-less Gold: Low Toxicity Antifouling in Marine Environments. (SAEC)

Summary

Organizers of this year's events created memorable experiences for attendees. Pulling together after three years of online gatherings, coordinators and attendees alike brought new energy to this season's conferences. Thank you to everyone who made these events so successful.



Thank You, Sponsors!

We are deeply thankful for the support of our many organizers and sponsors from this past conference season. Your generous contributions have furthered the advent of scientific thought and progress in Atlantic Canada's post-secondary research community and beyond, as well as impacted the lives of many aspiring scientists.

Acadia University

Acadia University, Earth and Environmental Science

Acadia University, Faculty of Science

Atlantic Aqua Farms

Atlantic Association of Research in the Mathematical Sciences (AARMS)

Atlantic Beef Products

Atlantic Canada Fish Farmers Association (ACFFA)

Atlantic Geoscience Society (AGS)

Biovectra

Bio Food Tech

Canada's Smartest Kitchen

Canadian Association of Theoretical Chemists

Canadian Botanical Association

Canadian Geological Foundation

Canadian Institute of Nuclear Physics (CINP)

Canadian Nutrition Society

Canadian Science Publishing

Canadian Society of Exploration Geophysicists (CSEG)

Canadian Society of Petroleum Geologists (CSPG)

Cavendish Farms

CGI

Charts Cafe

Dalhousie University, Faculty of Computer Science

Dalhousie University, Faculty of Science

Dalhousie University, Office of Vice-President Research and Innovation

ECW Inc.

Food Island

Fourwaves

Geological Association of Canada

Geoscientists Nova Scotia

Grenfell Campus, Memorial University of Newfoundland

GroundTruth Exploration	Prince Edward Aqua Farms
Hon. Patricia Arab (MLA Fairview-Clayton Park)	Probe Metals
Huntsman Marine Science Centre	Resourceful Geoscience Solutions (RGS)
Imperial Oil	Rogers
Institute for Computational Astrophysics (ICA)	Saint Mary's University
Island Abbey Foods	ShiftKey Labs
K.C. Irving Environmental Science Centre	Skretting
Lab 4 INC.	SNOLAB
Maritime Launch	Social Sciences and Humanities Research Council (SSHRC)
McGraw Hill Education	The Mining Society of Nova Scotia
MDA	Trace Analysis Research Centre (TARC)
MEOPAR	True North Psychological Services
Mercator Geological Services	University of New Brunswick
Mount Allison University	University of Prince Edward Island
Mount Saint Vincent University	Wiley
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