



NSIS 2024-2025 LECTURE SERIES NSIS1862.CA

October 7 – CBU

The Impact of Cape Breton's Changing Climate on its Fresh Water Resources



Fred Baechler
Hydrogeologist/
Hydrologist at EXP
Services Inc.

Mr. Baechler has been undertaking research on Cape Breton's changing **climate** and the impact on its **freshwater resources** for over 25 years. This lecture will identify how Cape Breton's climate is changing and what is known to date about how it is impacting the island's ground and surface resources.

November 4 – MSVU

How do insects stretch their physiological limits in response to environmental stress?



Dr. David Awde
Mount Saint Vincent
University

Increasing global temperatures and frequency of extreme weather events are likely outpacing the ability of most animals to adequately respond. Dr. Awde will explore the environmental and physiological mechanisms that influence **insect responses to temperature change**, and discuss future work that will compare and contrast these mechanisms using **native and invasive species**.

December 2 – StFX

Heart Health is Brain Health



Dr. Erin Mazerolle
St. Francis Xavier
University

How can we keep the mind sharp as we age? What is **dementia**, and can it be prevented? Why is it important to talk to a healthcare provider if you are noticing problems with **thinking** or **memory**? Dr. Mazerolle will help answer these questions by describing the tight relationship between **heart health** and **brain health**.

January 6

Careers in Science: Panel Discussion with Nova Scotian Scientists



**Online
Only!**
@6:30pm

All lectures will be hybrid events held at St. Mary's University (Stephanie MacDonald Lecture Theatre, SMU Atrium 101) and on line via Zoom links that will be posted one week before each seminar on the NSIS Public Lectures webpage .



NSIS 2024-2025 LECTURE SERIES NSIS1862.CA

February 3 – CBU

Ankukamkua'tu, 'doing treaty', in Fisheries



Dr. Shelley Denny
Unama'ki Institute of
Natural Resources

Despite the recognition of the treaty right to fish for a moderate livelihood in 1999 little movement toward enhancing governance occurred that respected the authority of both the Mi'kmaq in N.S. and the Department of Fisheries and Oceans. As a result, the **moderate livelihood fishery** is contested on the water and land. Dr. Denny will explore how the Mi'kmaq and DFO could govern Mi'kmaw treaty fisheries using **Two-Eyed Seeing**.

March 3 – SMU

Student Symposium



Join us as we discover the latest research findings of **student scientists** working at nearby N.S. research institutions.

We thank our partners who have joined us in our journey and mission to promote research and education in science...



April 7 – CBU

Understanding the Universe and its Evolution from 2 km Underground



Dr. Arthur McDonald
Queen's University
Nobel Physics Prize
2015

There has been remarkable progress in the past 60 years in understanding the **evolution of the Universe** since the **Big Bang**. Major contributions are being made by measurements in deep underground laboratories like SNOLAB, near Sudbury, Ontario. The lowest radioactivity lab on Earth. Measurements of **neutrinos** and **Dark Matter** will be described that address existential questions about the composition and evolution of our Universe.

May 5 – SMU

Stem cell proliferation gone wrong: Mechanisms exploited in cancer cell proliferation



Dr. Lori Borgal
Mount Saint Vincent
University

During **human development**, stem cells must proliferate in a precisely controlled manner, failure can result in tissues such as the brain not forming correctly. Dr. Borgal will introduce molecular mechanisms required for **stem cell proliferation**, and consider how disruption of these same mechanisms could lead to uncontrolled cell proliferation in **cancer**.