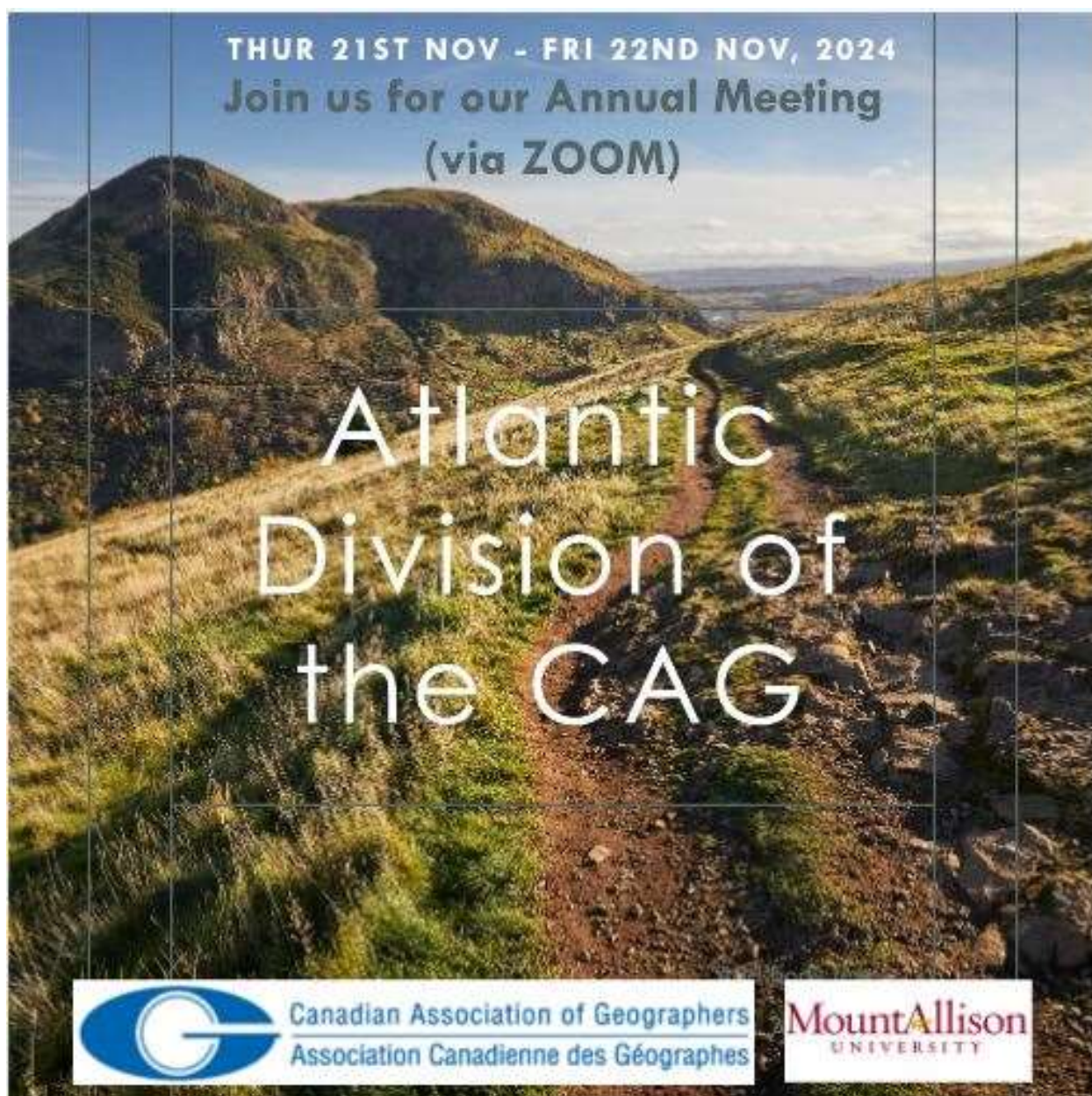


Presentation Abstracts and Registrant Biographies (Alphabetical)

ACAG/ACGA, Mount Allison University (via ZOOM)

21st November – 22nd November, 2024



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KEYNOTE PRESENTATION (Thur 21st Nov, 3:00–4:00pm)

“Opportunities and limitations of policy levers as a means to manage environmental resources: Reflections from 4 decades of direct engagement with water policy in Southern Africa”

PROFESSOR LARRY SWATUK

SCHOOL OF ENVIRONMENT, ENTERPRISE AND DEVELOPMENT (SEED), UNIVERSITY OF WATERLOO

WEB: <https://uwaterloo.ca/scholar/lswatuk>



Biography

Larry Swatuk is Professor in SEED at the University of Waterloo. He holds several other positions: Extraordinary Professor, Institute for Water Studies, University of Western Cape, South Africa; Adjunct Professor of International Development, St. Mary's University; External Research Fellow, Centre for the Study of Security and Development, Dalhousie University; and Research Associate at the Bonn International Center for Conversion (BICC) in Bonn, Germany. At UW he is also a Faculty Member of the Water Institute, the Balsillie School of International Affairs and is cross-appointed to the School of

Planning and the Department of Geography and Environmental Management.

Dr. Swatuk's research focuses on the political economy of natural resources with a particular focus on freshwater governance and management in the Global South. He teaches courses in global political economy, theories of international development, and water security. Swatuk is also Associate Editor of the open access journal *Water Alternatives* (<http://www.water-alternatives.org/>) and a founding member of the Environmental Peacebuilding Association (<https://environmentalpeacebuilding.org/>). Prior to joining the University of Waterloo, Swatuk was a lecturer at the University of Botswana and Associate Professor of Resource Governance at the Okavango Research Institute, Maun, Botswana (1996–2007); Senior Research Fellow, African Centre for Development and Security Studies in Ijebu-Ode, Nigeria (1995–96); and a post-doctoral fellow at the York Centre for International Security Studies (1993–95).

Mohammed Abubakari

SCHOOL OF ENVIRONMENT AND SUSTAINABILITY, UNIVERSITY OF SASKATCHEWAN

EMAIL: AMF932@USASK.CA



Biography

Abubakari Mohammed (Abu) is an interdisciplinary PhD candidate in the School of Environment and Sustainability at the University of Saskatchewan, with an interest in Indigenous farming knowledge and migration, food security and livelihood, and regional and local planning.

Presentation Abstract

“Exploring land-based interactions and relationships in a pluralistic agrarian context: The case of Ghana’s Atebubu” (Cancelled)

MOHAMMED ABUBAKARI, JAMES P. ROBSON

School of Environment and Sustainability, University of Saskatchewan, Canada

With the rapid pace of urbanization and the rise of intelligent technologies, human activity patterns are becoming increasingly diverse. These activities are no longer confined to the physical spaces people inhabit; online cyber spaces have become a significant and integral part of daily life. In this context, this report explores methods for perceiving human activities in integrated cyber-physical spaces, extracting human activity chains within these spaces, and analyzing network construction based on these activities. The accelerated urbanization process, frequent mass migrations, and the intensification of human activities and mutuality both online and offline present new challenges for urban science.

Vide Adedayo

UNIVERSITY OF LAGOS

EMAIL: VADEDAYO@UNILAG.EDU.NG



Biography

Vide Adedayo PhD is an Associate Professor, researcher and a consultant. Adedayo is also an International Development Research Centre award recipient, trained in the concept of Ecosystem Approach to Human Health. Vide Adedayo is currently domicile at the Department of Geography, University of Lagos, Nigeria, and specializes in agricultural and environmental geography, micro farming, urban agriculture, environment-human health, and gender-related issues.

Md. Abul Kalam Azad

NATURAL RESOURCES INSTITUTE, UNIVERSITY OF MANITOBA

EMAIL: AZADMAK@MYUMANITOBA.CA



Biography

M. Abul Kalam Azad is currently pursuing his PhD in Natural Resources and Environmental Management at the Natural Resources Institute, University of Manitoba. His PhD dissertation project explores how the interface of climate change and social inequality impacts disproportionately across populations in northeastern Bangladesh. Prior to starting his doctoral program, he completed a master's degree in Natural Resources Management (MNRM) in 2020 from the same institute. His master's research explored the role of social learning in recovery and community resilience to flash floods in Bangladesh. Mr. Azad also received his B.S.S. and M.S.S. in Sociology from the University of Dhaka, Bangladesh. He has extensive experience in the areas of social learning, climate justice and social equity, disaster risk reduction, community resilience, gender and vulnerability, health, and social policy. He has a number of national and international peer-reviewed research publications pertinent to social learning, vulnerability, climate change adaptation, disaster risk reduction, disaster governance, and community resilience.

Presentation Abstract

“Social inequality accelerating by flash floods in wetland communities of Bangladesh: A case of vicious cycle formation”

M. ABUL KALAM AZAD & C. EMDAD HAQUE
Natural Resources Institute, University of Manitoba

Despite substantial research on the societal impacts of climate-related risks, yet the interlinkage between climate-related extreme events, like floods, and social inequality have largely been ignored. Drawing on social inequality lenses of the Capability Approach (CA) and the Inequality-Climate Change Cyclical Approach (ICCA), we examined the interfaces of social inequality and flash flood; more specifically, we inquired how a vicious cycle might be generated between social inequality and flash flood effects, whereby initial inequality shapes exposure to flooding and makes marginal farmers suffer differentially from the effects of it. This, in turn, can widen inequality gaps. A mixed-method case study design was employed to investigate the implications of social inequality and flash flood in the Sunamganj wetland community of Bangladesh. Data were procured from two Unions (the lowest administrative unit in Bangladesh), namely Fenarbak and Beheli, involving a household survey ($n=377$), key informant interviews ($n=15$), and focus group discussions ($n=8$). The findings reveal that pre-existing social inequalities and their intersection generate disproportional exposure of the poor to flash flooding. Social inequalities -- especially assets and income -- are major modifiers for producing unequal exposure, and societal vulnerability (i.e. economic and non-economic loss and damage) to flash flood. The results further indicate that the wealthy households were subject to higher magnitude of economic loss and damage due to their entitlements to assets and income, but impoverished and marginal farm households experienced disproportional loss and damage. The greater loss of income from crops, an exclusion from wetland resources and institutional supports, and low market returns of agricultural products were the primary causes of this disproportionality. Our results also indicate although inequality gap is further widened by pre-existing inequality produced differential adaptive capacity to recover from this disproportional loss and damage, flood-triggered loss and damage generate such opportunity for agency that enhances resilience to flash floods. The study calls for serious policy attention to the reduction of social inequality caused by climate change-induced disasters through transforming or restructuring the existing socioeconomic, political, and governance systems.

Idris Babajide

UNIVERSITY OF LAGOS

EMAIL: ZBABAJIDE.IDRIS@GMAIL.COM



Lily Binney

SAINT MARY'S UNIVERSITY

EMAIL: LILY.BINNEY@SMU.CA



Biography

I am a first year masters student in the M.A in Geography program at Saint Mary's University. I also recently completed a Bachelor of Environmental Studies degree with a minor in Geography.

I am specifically interested in the conservation of old growth forests and am driven to understand the unique role these ecosystems hold within the environment.

Carissa Brown

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

EMAIL: carissab@mun.ca



Biography

I am originally from Thunder Bay, Ontario, on the north shore of Lake Superior and the heart of the boreal forest. Not surprisingly, my research background has emphasized boreal forest systems, particularly at the northern and southern edges of its distribution. I am broadly interested in plant species and communities at the edge of their range, focusing on the direct and indirect effects of climate change on species' distributions.

Presentation Abstract

“Stories Trees Tell Us”

CARISSA BROWN

Department of Geography, Memorial University

Trees are long-lived, sessile organisms; not the group one might immediately think of to study the impacts of climate change. Yet, trees record a history of the conditions they have experienced. Their wood can tell us the story of that history, helping us to understand the environment through the tree's lifespan, disturbances it may have experienced, or the history of an object made of that wood. Trees can also tell us stories by where they do and do not grow. Those stories help us predict where they may (or may not) occur in the future under ongoing global change. Using examples from 1) alpine treeline, 2) fire ecology, and 3) a dendroarchaeology involving a mysterious shipwreck, I will illustrate how we can turn to trees to understand the past, present, and future of places and things.

Peter Bush

SAINT MARY'S UNIVERSITY

EMAIL: PETER.BUSH@SMU.CA



Biography

Peter Bush serves as the Provincial Landscape Ecologist and Old-Growth Forest Coordinator within the Forestry Division of the Nova Scotia Department of Natural Resources and Renewables. He holds a Ph.D. in Geography from the University of Western Ontario, an M.Sc. in Forestry from Lakehead University, and a degree in Environmental Geography from Laurentian University. An adjunct professor at Saint Mary's University, Peter's research specializes in old-growth forests, landscape planning, ecological connectivity, and protected areas.

Johnathan Carter

GEOMORPHOLOGIST EXTRAORDINAIRE (CURRENTLY BETWEEN CONTRACTS). ALUMNUS OF MOUNT ALLISON AND MEMORIAL UNIVERSITY

EMAIL: JDHC42@MUN.CA



Biography

Casual employee of the Geological Survey of Canada. Lead author of GSC Open File 9178, "Current state of coastal change monitoring and mapping in Canada: towards a national framework." In addition to coastal terrain, other environments of interest include karst and glacial.

Presentation Abstract

"Coastlines, shorelines, and the changes therein: What is an optimal coastal change framework?"

JOHNATHAN CARTER¹, NICKY HASTINGS²

¹Independent (formerly Geological Survey of Canada)

²Geological Survey of Canada, Natural Resources Canada

The edge where the land and ocean interface "call it the coastline or shoreline" is a dynamic environment of high-constant wave action, tidal cycles, and sediment transport. Under these and other influences, coastal changes occur in many forms – including the dual processes of erosion and accretion. Depending upon the local conditions, a given coastal site may experience stability or an overall trend towards either erosion or accretion, potentially altering the coastline position and even the underlying terrain. Understanding the spatial distribution of these trends may be invaluable for protecting human infrastructure and quality of life.

A literature review of Canadian coastal change knowledge documented multiple different frameworks used independently by provinces and universities for mapping changes in the coastal regions. To improve clarity and consistency when comparing rates of coastal change across the country, the best practices from the separate frameworks were combined into a single National Coastal Change Classification System. The current

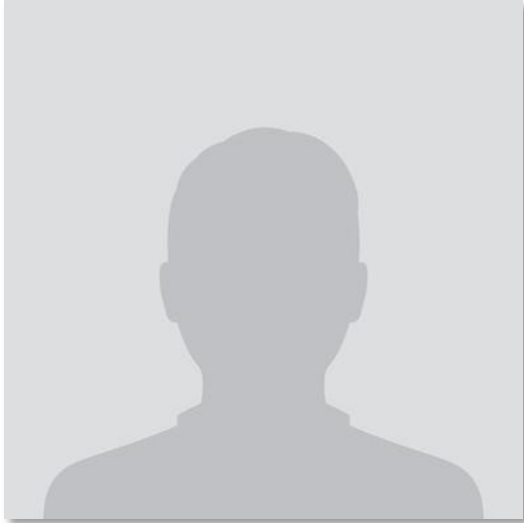
prototype uses 16 classes to categorize sites of stability, varying degrees of erosion and accretion, and absent or subpar data.

During the same review, inconsistent definitions for the terms coastline and shoreline were observed across different studies and institutions. This inconsistency creates ambiguity when comparing coastal change across Canada, while standardizing these terms would help streamline communication and comprehension. Therefore, we propose that coastline be defined based on geomorphic features and shoreline on the tidal datum separating the intertidal and supratidal zones.

Corrine Cash

MOUNT ALLISON UNIVERSITY

EMAIL: CCASH@MTA.CA



Biography

I am an Assistant Professor of Planning and Community Climate Adaptation in the Department of Geography and Environment at Mount Allison University.

Justine Vande Caveye

THOMPSON RIVERS UNIVERSITY

EMAIL: JUSTINE.VANDECAVEYE@GMAIL.COM



Biography

I am a student enrolled in a Geography and Environmental Studies program at TRU in Kamloops. I grew up in the area, and love exploring not only my province but the whole world. I have a passion for travel with sparked a love for looking for connections and patterns. I also have a love for the outdoors and the things within it, creating the program a perfect melting pot for the things I care about. Within the environment I appreciate and have a deep love for the indigenous way of looking at out world. A way to incorporate the environment as its own being outside of us, and that we are guests. I am excited to further my career and knowledge with geography and environmental realm. I'm also interested in photography and enjoy capturing my travels and wherever I end up going.

Domenique Ciavattone

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

EMAIL: DCIAVATTONE@MUN.CA



Biography

Domenique Ciavattone (she/her) is a doctoral student at Memorial University of Newfoundland. Situated in Geography, Domenique's research examines ontological diversity in Rights of Nature movements, focusing on efforts to grant legal personhood status to oceans. Domenique holds an M.A. in Climate Change and Global Sustainability and a B.A. in Global Social Justice and Communication. Domenique conducted her M.A. thesis in Peru, where she collaborated with Quechua communities in the high Andes to strengthen conservation efforts and co-design a pluriversity to establish a decolonized, transdisciplinary model of biocultural education. She has also lived, worked, and studied in Brazil, Ecuador, Iceland, India, Italy, Kenya, South Africa, and Tanzania.

Presentation Abstract

“What, When, Where, Who is the Ocean? Putting Rights of Nature into Practice in Ontologically-Multiple, Fluid, International Spaces in Canada and Ecuador”

DOMENIQUE CIAVATTONE

Memorial University of Newfoundland

Since the mid-2000s, when Ecuador and Bolivia officially recognized the inherent rights of Mother Earth in their national constitutions, a variety of initiatives have emerged around Rights of Nature. Attempts to grant rights to rivers, forests, mountains, etc. are based on possibilities of moving toward more socially and ecologically just futures. My research examines a new area into which these trends are moving: the ocean. To date, Rights of Nature frameworks have been largely established within national jurisdictions; the ocean

unavoidably implies an international dimension. Rights of Nature has been applied to relatively defined entities (a mountain, a river, etc.); the ocean is harder to delimit. Rights of Nature movements thus far have involved local communities; the ocean seems to necessitate nation-state involvement. To explore these contrasts, I conduct research in Canada and Ecuador, the first (and only) two countries with Rights of Ocean movements that, while new, stem from over 15 years of terrestrial cases. An international context like the ocean easily lends itself to dialogue between governments, but this introduces barriers to the inclusion of local interests. My research addresses this problem by seeking to identify the challenges and opportunities in integrating and prioritizing local voices in an international arena. The outcomes of this research will inform domestic and international climate change and conservation policies by providing tangible steps forward for lawmakers and local communities. The results will also contribute significantly to the social sciences, particularly political ecology and human geography, by offering a practical analysis of Rights of Nature movements in a field that is largely theoretical.

William Chapman

MOUNT ALLISON UNIVERSITY

EMAIL: WMCHAPMAN@MTA.CA

Biography



I am a 4th year Environmental Science student from Ottawa, Ontario, minoring in Language and the Mind. I am excited to return to the ECAB Lab (<https://www.ecablab.com/>) this summer to continue my work in scientific communication that I began last year as a research assistant and to begin work on my honours thesis. My research revolves around the pathogenic *Vibrio* spp. bacteria in shellfish in the Northumberland Strait and PEI's North Shore. Specifically, I am interested in how water temperature affects bacteria counts, and how marine conditions that favour *Vibrio* spp. will evolve over the next few decades as sea surface temperatures rise. Please see www.wills-corner.com for more information.

Presentation Abstract

“Modelling *Vibrio parahaemolyticus* contamination in eastern oysters in the southern Gulf of Saint Lawrence”

WILLIAM CHAPMAN¹, JOSHUA KUREK¹, DAVID LIESKE¹, CLARK RICHARDS², JEFFERY CLEMENTS²

¹Department of Geography and Environment, Mount Allison University

² Fisheries and Oceans Canada

Vibrio parahaemolyticus (Vp) is a marine or estuarine bacterium that regularly infects shellfish around the world and can cause severe foodborne illness in humans and financial

loss to the aquaculture industry. Despite past outbreaks involving oyster contamination in Canada and concern over increasing numbers of Vp tests failing regulations, little is known about when, where, or why Vp will show up in the Atlantic region. Vp levels are known to be dependent on several environmental factors, including water temperature, salinity, and chlorophyll-a. Using remote-sensed sea surface temperature and modelled salinity and chlorophyll-a for the southern Gulf of Saint Lawrence, along with archival Vp test results from oyster processing facilities, we developed a predictive random forest model for Vp outbreak occurrence with a misclassification error rate of 9.8%. Using the predictive model, we inferred a historical 25-year Vp climate to understand how Vp occurrence in the region has changed over time, corroborating an early monitoring study in the Atlantic region. Predictive models for Vp are an essential tool to understanding the progression of Vp outbreaks in the southern Gulf of Saint Lawrence for the future, and for informing mitigation and management efforts in the face of this growing issue.

Riley Cotter

MEMORIAL UNIVERSITY

EMAIL: RCCOTTER@MUN.CA

Biography



Riley Cotter (settler, he/him) is a master's student in the Department of Geography at Memorial University under the supervision of Dr. Max Liboiron, where his thesis work investigates marine surface water plastics in Nunatsiavut using place-based and community-first methods. As a member of the Civic Laboratory for Environmental Action Research, Riley has worked on a number of different projects, including a review of plastic research in the Arctic and several community-oriented marine plastic monitoring programs. Following completion of his master's degree, Riley plans to pursue a PhD in a related area of study.

Presentation Abstract

“Prioritizing Place in Marine Plastics Research”

RILEY COTTER

Memorial University

Most academic plastic monitoring projects are conducted by and for academics, as evidenced by a focus on general, global-scale results that do not come to bear directly on any human-scale places or lifeways. As counter to this norm, community-based environmental monitoring is increasingly popular method for quantifying plastics in a variety of environmental media, in part because it can improve the quality of research outcomes through more robust sampling design, collection, and analysis. However, it is common for community-based analyses to deprioritize community goals and participation near the end of a research project, near the time results are analyzed and conclusions are drawn. In environmental plastics research, a consequence of such deprioritization is an inevitable lack of focus on place as an important variable in results interpretation. This presentation will discuss how place belongs as a key analytic for understanding environmental plastics in relation to humans, including how place can inform best practice

for binning, combining, and (de)generalizing spatial results. As a case study, we will discuss how ongoing plastic monitoring project partnered by the Civic Laboratory for Environmental Action Research (CLEAR) and Nunatsiavut Government (NG) in Nunatsiavut prioritizes place-based analytics. We will discuss the influence of place on the entire research program, with a focus on how methods and results are structured to prioritize results that are locally meaningful, and how this in turn creates results that are more robust from an academic standpoint.

Marina Cuselli

MEMORIAL UNIVERSITY

EMAIL: MCUSELLI@MUN.CA



Biography

With a Master's Degree in Marine Sciences, my current doctoral research moved more inland, studying nature-based solutions to mitigate coastal erosion on the Avalon Peninsula, Newfoundland. My interests lie in the data acquisition process and finding the best solutions and methodologies for environmental management in coastal and marine habitats.

Presentation Abstract

“The zombie plant: use of Scotch Lovage for Nature-based Solutions”

MARINA CUSELLI, CARISSA BROWN, JOE DARAIO
Memorial University of Newfoundland

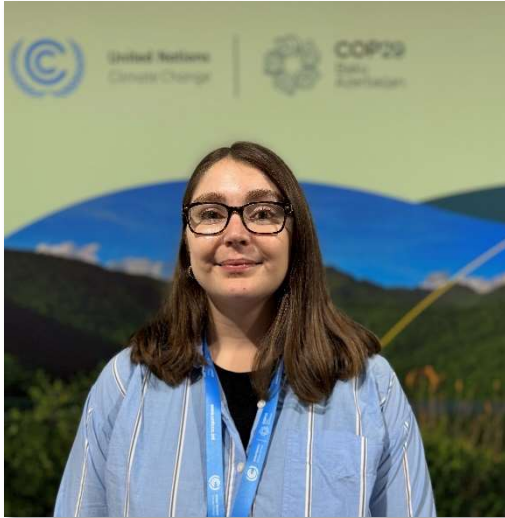
By 2100, the sea level in Newfoundland is projected to rise 50–100 cm, which, in combination with increased precipitation, will increase exposure to coastal hazards. It is vital to protect coastal areas for their ecological and cultural value. Nature-based solutions for coastal protection are cost-effective, protect shorelines, benefit carbon sequestration, and restore habitats. Nature-based solutions have not been widely applied in Newfoundland, partly due to its unique coastal landscape, and our primary goal is to assess the potential use of such solutions on the island. The objectives are to i) characterize vegetation-coastal characteristic associations to determine the best species-environment matching for Newfoundland's coasts and ii) conduct transplantation and species-suitability trials at a subset of coastal study sites. To meet these objectives, vegetation and substrate surveys were conducted in 27 bays on the Avalon Peninsula. Multivariate analyses of these data revealed associations between existing vegetation community assemblage and physical characteristics of coasts; e.g., Scotch lovage was associated with sandy and rocky coastlines. A subset of Scotch lovage plants underwent salt spray trials and was subsequently used in a transplant experiment in Ferryland, NL, a site of cultural importance

currently threatened by coastal erosion. Ultimately, a framework for integrating nature-based solutions and a map of potential sites around Newfoundland will be developed for the use of nature-based solutions to mitigate coastal erosion.

Megan Devoe

McMASTER UNIVERSITY

EMAIL: DEVOEM@MCMASTER.CA



Biography

Megan (she/her) is an activist-scholar currently living on the unceded territories of the Mi'qmkaki people in what is colonially known as Halifax, Nova Scotia. She is currently a PhD candidate in the Labour Studies department at McMaster University. Her research focuses on the perceptions and experiences of just transition policies among workers and communities in rural Nova Scotia who depend on fossil fuel extraction for economic survival, but at a distance. Megan also works with a Canadian-based environment organization called Shake Up The Establishment (SUTE) working to advance climate justice across so-called Canada and with an international youth-led organization called Care About Climate (CAC) which works to prepare youth to participate in policy spaces.

Daniilo Ferreira

STATE UNIVERSITY OF CAMPINAS – SÃO PAULO – BRAZIL

EMAIL: DANILO.CARDOSO@EDU.MT.GOV.BR



Biography

Ph.D. in Geography from the Institute of Geosciences at the State University of Campinas (IG-UNICAMP, São Paulo, Brazil, 2016–2024).

Master's degree in Geography from the Institute of Socio-Environmental Studies at the Federal University of Goiás (IESA-UFG, 2012–2014), with an exchange program at Rio de Janeiro State University (UERJ), São Gonçalo, RJ, in 2013.

Specialization in Environmental Management from the Educational Support Center (2011–2012).

Bachelor's degree in Geography from the State University of Goiás (UEG), Itapuranga (2010).

Geography teacher with the Mato Grosso State Department of Education (since 2019).

Experienced in Geography, with a focus on various topics, including Geography, the Epistemology of Geography, Physical Geography, the History of Geomorphology, and the History of Science.

Presentation Abstract

“Alexander von Humboldt and the Physical Description of the World: Landscapes and Mountains in Maps”

DANILO FERREIRA

State University of Campinas – São Paulo – Brazil

Alexander von Humboldt, a 19th-century polymath, revolutionized our understanding of the natural world. His extensive travels, particularly across the Americas, led to groundbreaking insights into the interconnectedness of Earth's systems. A central aspect of his work was his meticulous observation and documentation of landscapes, often accompanied by detailed maps. Humboldt's approach to landscape study was unique. He viewed landscapes not as static entities but as dynamic systems influenced by factors such as

climate, geology, and human activity. By emphasizing holistic observation and quantitative measurement, Humboldt was able to identify patterns and relationships that had previously gone unnoticed. Mountains were a particular focus of his interest. He recognized their significance as climatic barriers, sources of rivers, and reservoirs of biodiversity. His detailed observations of mountain ranges such as the Andes and the Himalayas led to groundbreaking insights into their formation and impact on regional climates. Humboldt was also an accomplished cartographer. His maps were not mere representations of geographic features but visualizations of complex relationships. By combining topographic data, climatic information, and botanical observations, he created maps that revealed the intricate patterns of nature. Humboldt's work serves as a reminder of the importance of exploring the natural world with curiosity and wonder. By understanding the complex relationships between different components of the Earth system, we can better appreciate the beauty and fragility of our planet.

Jill Francis

CENTRE OF GEOGRAPHIC SCIENCES (NSCC-COGS)

EMAIL: francisjillt@gmail.com



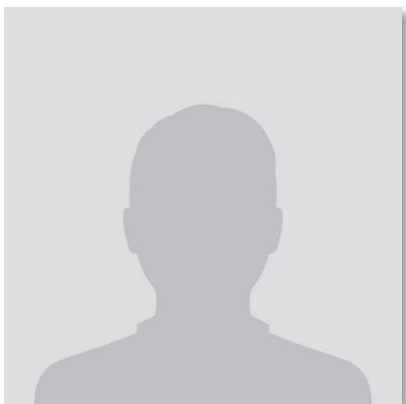
Biography

Student - COGS Geospatial Data Analytics -
Class of '24-25

Eva Fraser

CENTRE OF GEOGRAPHIC SCIENCES (NSCC-COGS)

EMAIL: evamfraser@gmail.com



Biography

Student – COGS.

Raphaëlle Fréchon

UNIVERSITÉ DU QUÉBEC EN OUTAOUAIS

EMAIL: raphaelle.frechon@gmail.com



Biography

Greetings! My name is Raphaëlle. I am an environmental biologist with a masters in forest management. I worked in those fields as well as in environmental education for a few years before initiating my research journey in the transdisciplinary world of ecological economics. After two years of doing my Ph.D, I am working on the contributions of the ecosystem service approach for nature conservancy. One of my main research goal is to highlight common grounds which could help build a more sustainable future. I and am thrilled to share some of my work and get insight from the welcoming community of geographers.

Presentation Abstract

“The benefits of protected areas: The exploration of ecosystem services from two contrasting regions in Quebec, Canada”

RAPHAËLLE FRÉCHON¹, MARIE SAYDEH^{2,1}, KLOE CHAGNON-TAILLON^{3,1}, DANIEL SCHOENIG^{4,1}, LYNDA GAGNÉ¹, JÉRÔME DUPRAS¹, JEAN-FRANÇOIS BISSONNETTE², HUGO ASSELIN³ ET JULIE LAFORTUNE¹

¹Université du Québec en Outaouais

²Université Laval

³Université du Québec en Abitibi-Témiscamingue

⁴Université du Québec à Montréal

The ecological economics research chair of Canada completed a research project in collaboration with the government of Quebec, Canada. We assessed various contributions of protected areas in terms of ecosystem services. This three-year project included

northern and southern regions of Quebec to analyse two different land management and conservation contexts with contrasting social, ecological, and economical dynamics. A literature review on ecosystem services and conservation as well as socio-ecological portraits of our study areas were conducted as the first steps and were the pillars supporting further analysis. Forward, we identified, modelled, and mapped four quantifiable ecosystem services using Integrated Valuation of Ecosystem Services and Tradeoffs (InVEST) modelling tools. The capacity and contributions of protected areas in generating ecosystem services as opposed to other land uses was highlighted. We then investigated several economic valuation options for these ecosystem services in both study areas to compare the economic contribution of protected areas in ecosystem service supply and to guide further analysis. In parallel, we evaluated governance dynamics and socio-cultural services in southern Quebec through a social interdependency matrix. In northern Quebec, we mapped socio-cultural services of indigenous communities combining arts-based methods and adapted photovoice. Finally, we developed a decision-making tool to combine the different variables identified by the quantitative and qualitative approaches mobilized in this project. The outcomes of this transdisciplinary research project will therefore be briefly shared and presented.

Amy Frost-Wicks (she/her)

MEMORIAL UNIVERSITY OF NEWFOUNDLAND AND LABRADOR

EMAIL: AMFW81@MUN.CA

Biography



I am currently completing my MSc with the Northern EDGE Lab, supervised by Dr. Carissa Brown, at Memorial University of Newfoundland and Labrador. My research focuses on characterizing the distribution and demographic niches of black ash (*Fraxinus nigra*), a Species At Risk, across the island of Newfoundland. I have a strong interest in landscape and forest ecology, and my background is rooted in land and species conservation. I completed my BSc (Hons) in Environmental Science at Dalhousie University, where my thesis involved creating a model of Blanding's turtle habitat fragmentation and barriers in Rouge National Urban Park. During this time, I also spent several summers working as an intern with the Nature Conservancy of Canada in Nova Scotia. Post graduation, I spent three years as the Manager of Land Stewardship at Island Nature Trust on Prince Edward Island, where my interest in contributing to ecological knowledge grew. I'm excited to now be back in the world of academia. After spending a summer with black ash in the forests, wetlands, and cliffsides of western Newfoundland, I look forward to digging into the data - stay tuned!

Email: amfw81@mun.ca

Presentation Abstract

“Seeing the trees for the forest: Characterizing demographic niches and herbivory of black ash on Newfoundland, Canada ”

AMY FROST-WICKS, CARISSA BROWN

Memorial University of Newfoundland and Labrador

Black ash (*Fraxinus nigra*) is one of the island of Newfoundland’s rarest native tree species. Considered to be critically endangered on a global scale, it is listed as Threatened in Newfoundland under the Endangered Species Act. Black ash is a culturally significant species which also fills a unique ecological niche within wetlands, riparian forests, and limestone slopes. Despite its importance and status as a Species At Risk, black ash has historically been understudied throughout its North American range. This holds true in Newfoundland, where little is known about the species’ provincial distribution, abundance, and biology. My study aims to characterize the microsite conditions in which black ash grow at various life stages (germinant, seedling, sapling, mature) and growth forms (treelike and shrubby), across its provincial distribution. I am also examining the presence, severity, source, and geographic patterns of herbivory on this species. Between June and October 2024, I collected field data at 34 known black ash growing sites throughout western Newfoundland. I sampled parameters at multiple scales, including the general site conditions, measuring individual black ash tree characteristics, and assessing environmental conditions within the immediate area of black ash individuals. These data will be plotted using non-metric multi-dimensional scaling ordinations to identify specific levels of ecological variables that are most closely associated with each size class and growth form. This information may contribute to black ash conservation efforts in Newfoundland by informing species distribution modelling, restoration planting, and threat management efforts.

Danielle Gallina

QUEEN'S UNIVERSITY

EMAIL: DANIELLE.GALLINA@QUEENSU.CA



Biography

My name is Danielle. I am a first year MPL Candidate in the School of Urban and Regional Planning at Queen's University. I am also a member of the Population and Place Research Lab directed by Dr. Maxwell Hartt at Queen's University. I have a Bachelor of Arts (Honours) in Sociology from Trent University, specialization in Health Studies, and a Bachelor of Arts in Geography from the University of British Columbia. My research interests include: shrinking cities, aging people and places, and resilient urban planning.

Presentation Abstract

“Municipal Age-Friendly Plan (E)valuation”

DANIELLE GALLINA¹, MAXWELL HARTT¹, SAMANTHA BIGLIERI², and MALIHA MAJEED³

¹ Queen's University

² Toronto Metropolitan University

³ City of Kingston

Over the past two decades, cities around the globe have experienced a significant demographic shift as populations have begun to rapidly age into older adulthood. Canadian cities are no exception. However, it remains unclear whether cities in Canada are prepared to meet the needs of their aging population. To assess the age-friendliness of Canadian cities, this study examined local plans and policies of 19 municipalities across the Province of Ontario, Canada. Specifically, a plan evaluation content analysis was conducted to assess each municipality's Official Community Plan and other supporting statutory documents to determine whether a given municipality is planning for an aging population by requiring the creation of age-friendly environments. Planning and policy documents for each municipality were evaluated using 71 indicators to determine the degree to which

age-friendly characteristics were incorporated. This study found that while Canadian cities are generally aware and recognize that their population is aging, they often fail to explicitly provide targeted policies for older adults in their planning documents. These findings inform discussions of the practical challenges of planning for an older adult population and the development of targeted recommendations for municipalities to incorporate age-friendly elements and policies within their statutory plans

Graydon Gillies

MEMORIAL UNIVERSITY OF NEWFOUNDLAND AND LABRADOR

EMAIL: GJGILLIES@MUN.CA

Biography

I am a new PhD student at the Northern EDGE Lab in the Geography Department at Memorial University of Newfoundland and Labrador. I'm an ecologist at heart and am fascinated by the ecological and evolutionary processes that determine where species are distributed, what processes prevent them from moving to new spaces, and what traits might be advantageous for undergoing climate-driven range shifts. More broadly, my interests extend into many areas of ecology, evolution, and biogeography.



I completed my BSc in Environmental Sciences at the University of British Columbia, Vancouver, and my MSc in Biology at Queen's University, Kingston. For my MSc work, I studied a small dune plant endemic to the Pacific coast of North America, *Camissoniopsis cheiranthifolia*. I investigated how the availability and connectivity of habitat varies towards the species northern range limit, and how changing population dynamics across space might act to prevent the plant from successfully establishing beyond its current distribution.

During my PhD with Dr. Carissa Brown, I hope to investigate the processes that inhibit (or facilitate) range expansion of elevational and latitudinal treelines. In particular, I'm interested how masting, the intermittent synchronized production of large quantities of seeds, might act to overcome barriers to range expansion. For example, the simultaneous production of many seeds might result in predator satiation, allowing for successful beyond-range establishment of surviving seedlings. I would love to connect with folks interested in species' range limits, species' distributions, and dispersal!

Presentation Abstract

“Assessing post-wildfire forest resilience in coastal, subarctic forests of Labrador”

GRAYDON GILLIES¹, LUCAS BREHAUT^{1,2}, JOEL BOWMAN¹, & CARISSA BROWN¹

¹Department of Geography, Memorial University of Newfoundland & Labrador

²Canadian Forest Service

Climate change has and continues to alter forest fire regimes across the Canadian boreal forest. With changes to the frequency, severity, and area burned, it is vital to understand how forests respond to and recover from fire. Fire-adapted species, such as black spruce, require intense heat to release seed contained within their cones, leading to bursts of post-fire recruitment. However, with increasing fire frequency, it's possible that some forests may not reach reproductive maturity before consecutive burns, preventing successful recruitment and leading to a shift in community types. While post-fire recruitment is well-studied across much of the boreal forest, there has been little work that aims to understand how post-fire recruitment might be affected by less hospitable coastal climates. To investigate how post-wildfire recruitment of fire-adapted species might vary in coastal climates compared to inland climates, we conducted a survey of burned stands across a ~500 km coastal gradient extending inland from the Atlantic coast in southern Labrador. In 2015, we sampled seedling counts, seedling heights, and organic soil depth at 19 sites that have each burned between 9 to 77 years prior to the survey. We found that coastal climates may substantially reduce seedling recruitment after severe fire and hypothesize that the benefits of severe fire for recruitment may be outweighed by the associated combustion of sheltering vegetation in coastal regions that would otherwise buffer emerging seedlings from harsh coastal conditions. This work progresses our understanding of boreal forest resilience to fire in coastal climates compared to inland climates.

Mohammed-Gazali Hambali

UNIVERSITY OF BRITISH COLUMBIA

EMAIL: MOHAMMEDGAZALI10@GMAIL.COM



Biography

I am a master's student in the department of geography at the University of British Columbia. My research interests are in health, climate change, energy equity, energy democracy, and just energy transitions and rural livelihoods.

Currently, I am exploring the justice dimension of energy transitions in the global south. I am examining how energy transitions affect marginalized communities in developing nations and how they can be more just and equitable. I am examining the social, economic, and environmental aspects of energy transitions. I hope to contribute to the development of sustainable and inclusive energy transition policies that prioritize the needs of vulnerable populations. Through my research, I aspire to promote greater awareness and understanding of the importance of climate justice in shaping a more equitable and sustainable future for all.

Presentation Abstract

“Renewable energy transitions, scalar-politics, and slow violence: Implications for diversely situated communities and individuals in rural Ghana”

MOHAMMED-GAZALI HAMBALI

From the perspectives of political ecology and rural studies, scholars have critiqued RE as green extractivism and green grabbing. However, much of this literature focuses on large-scale, expansive, and exploitative forms of RE projects rather than less mundane, fluid and unsustainable transitions that incrementally turn agricultural land into 'solar landscapes'. Using concepts such as slow violence, feminist political ecology, and scalar politics, this paper looks at RE transitions in Ghana. It highlights how globally negotiated energy

transitions play out at the local level and shape the lives of diversely situated communities and individuals in rural communities. Certain global environmental governance processes may link to some of these issues, while others may be specific to the Ghanaian context. This paper suggests reframing RET policies and praxis to address both benefits and burdens in local contexts.

Syeda Barirah Hasan

NSCC-COGS

EMAIL: SBARIRAHASAN@GMAIL.COM



Biography

Master's student, COGS.

Pierrette Janes-Bourque

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

EMAIL: ajanesbourqu@mun.ca



Biography

Pierrette Janes-Bourque (she/her) is a settler scholar who grew up along the Wolastoq river in the unceded and unsurrendered territory of the Wolastoqiyik, Mi'kmaq and Peskotomuhkati (New Brunswick). Pierrette holds a Bachelor of Philosophy in Interdisciplinary Leadership from the University of New Brunswick, where her studies mainly focused on sociology, social justice, and environmental science. Pierrette also worked as a Stewardship Coordinator for the Nature Trust of New Brunswick for three years after her degree, where she oversaw monitoring and restoration activities on over 80 protected areas within the province.

Pierrette is currently a Masters of Science in Geography student in Ktaqmkuk (Newfoundland) at Memorial University. Her research focuses on climate-adaptive forestry practices for the island for Ktaqmkuk using a common garden experiment to study the effects of environmental treatments on regionally diverse seedlings. Currently, her experiment is comprised of 900 tree seedlings from four different provinces in Canada and includes four Atlantic Canadian tree species: red spruce (*Picea rubens*), tamarack (*Larix Laricina*), trembling aspen (*Populus tremuloides*), and yellow birch (*Betula alleghaniensis*). Pierrette is interested in all things trees, with her research interests mostly focused on the effects of climate change on plant communities, and species range dynamics.

Presentation Abstract

“If Seeds Could Fly: The Role of Species Provenance in Climate Adaptation Strategies”

PIERRETTE JANES-BOURQUE, DR. JOEL FINNIS, & DR. CARISSA BROWN
Memorial University of Newfoundland

Climate projections for the island of Newfoundland indicate that the region can expect an increase in precipitation and warmer temperatures over the next 50 years. Adapting to these anticipated changes will require tree ranges to shift at a rate which far exceeds natural dispersal patterns, and recent research in North America has shown that trees are unable to keep pace with climate change. We are investigating potential climate adaptive planting options for the island of Newfoundland using a common garden experiment. Common garden experiments (CGE), when trees from a range of latitudes are grown in a common plot and exposed to experimental treatments, can be used to determine the climatic effects on regionally diverse seedlings. Our project seeks to understand how localized environmental effects such as freeze/thaw cycles and coastal salt spray affect the survival, productivity, and health of tree species. Where applicable, we will conduct the experiment on four Atlantic Canadian tree species, including trembling aspen (*Populus tremuloides*), red spruce (*Picea rubens*), tamarack (*Larix laricina*), and yellow birch (*Betula alleghaniensis*). By completing the CGE on populations from New Brunswick, Nova Scotia, Newfoundland, and Ontario, we will better understand which populations of these species are suitable for adaptive planting in both Newfoundland and across Canada. As Newfoundland faces rapid climatic changes, it is crucial that climate adaptation research is conducted to inform government strategies and protect native biodiversity.

"Anzoa" Madelene Kajusa

THOMPSON RIVERS UNIVERSITY

EMAIL: Kajusamadelene@gmail.com



Biography

"Anzoa" Madelene Kajusa is in her fourth year at TRU (Thompson Rivers University) pursuing her bachelor's degree in communication and digital journalism with a minor in sociology. She is a first-generation South Sudanese Canadian her roots are from the Ma'di Tribe of South Sudan. Her connections with geography started when she took GEOG 3700 Field Course in Geography – Japan. This field course gives students a chance to learn first-hand about the human and environmental geography of Japan and gain field experience analyzing the planning of Japanese neighbourhoods. Since then Madelene has taken a few more geography classes and has completed a directed study research on The Regional Geography of South Sudan, and is currently a research assistant for Dr. Tom Waldichuk who is Professor in the Geography department at TRU in his research Engaging Virtual Field Trips. Madelene's interests include: regional geography, cultural geography, feminist geography, social geography, geography of arts and crafts, medical and health geography, environmental sociology, medical sociology, watersheds, intergenerational trauma, healing within the diaspora, Indigenous studies, South Sudanese studies, refugee studies, psychological effects of war and conflicts, mental health, first generation struggles/ experiences, youth homelessness, institutional racism within the Canadian education system, and trauma studies. Today she would like to share a little bit of her directed studies research The Regional Geography of South Sudan.

Presentation Abstract

“The Regional Geography of South Sudan”

"ANZOA" MADELENE KAJUSA
Thompson Rivers University

This course explores the emergence of South Sudan as a distinct space through the organizing concepts of regional geography, human geography, cultural geography, feminist geography, the sociological perspective, and cross-cultural interaction. There is a lack of education being taught about South Sudan in the Canadian school system, while there is a huge population of South Sudanese people in Canada. I wanted to do this research project in order to let our voices be heard and represented in a positive light.

Bridget Kakooza

MEMORIAL UNIVERSITY OF NEWFOUNDLAND AND LABRADOR

EMAIL: BNKAKOOZA@MUN.CA



Biography

I hold a Bachelor of Arts in Education (Geography Major) and a Master of Science in Environment and Natural Resources Management, both from Makerere University in Kampala, Uganda. I am currently pursuing an MSc in Geography at Memorial University of Newfoundland, Canada. My research interests, initially focused on waste management and plastic pollution, have evolved from studying plastics in surface water and sediment samples to investigating their presence in diets of Arctic fauna, such as Ringed seals (Natset).

Presentation Abstract

“The Spring (Upingasak) Diet of Upper Lake Melville and Groswater Bay Ringed seals (Natset) in Nunatsiavut, Labrador, Canada”

BRIDGET KAKOOZA

Memorial University of Newfoundland

In many cases, researchers tend to extrapolate findings from other regions to explain dietary trends, which can overshadow the importance of local prey species and fail to capture the unique ecological dynamics of specific landscapes. Each region’s environmental conditions, prey availability, and ecosystem interactions contribute to distinctive dietary patterns that may not be fully understood through generalizations. This paper examines the Spring diet of Ringed seals (*Pusa hispida*) in Nunatsiavut, Labrador, an Arctic region where these seals are culturally, nutritionally, and economically significant to Inuit communities. Understanding the diet of Ringed seals during the early Spring period is crucial for assessing their ecological role and the implications of changing Arctic environments on their foraging behavior. This study analyzed the stomach and intestinal

contents of Ringed seals (Natset) harvested in Nunatsiavut to identify prey composition and dietary patterns. Results indicate a diverse diet primarily consisting of Capelin (*Mallotus villosus*), Arctic cod (*Boreogadus saida*), sand lance (*Ammodytes* spp.), and a variety of crustaceans and molluscs but also non-prey items. These findings provide insight into the trophic interactions and foraging strategies of Ringed seals during the spring season, highlighting the importance of key prey species and the potential impacts of climate-driven changes on their diet. The chapter contributes to a broader understanding of the ecological dynamics of Ringed seals in the context of a rapidly changing Arctic ecosystem.

Dr. Nathuram Kaswan

RAJASTHAN GEOGRAPHICAL ASSOCIATION

EMAIL: NRKASWAN@GMAIL.COM

Biography



Retired Professor of Geography from college education Rajasthan India, I've 40 years Geography teaching experience to the graduate and post graduate students. I've guided several research students. I've presented research papers in national and international Geography seminars and also organized several seminars at my department. I've written text books for school and college level students. My thesis entitled Energy Resources and Economic Development of Rajasthan: A Study of Electricity Supply Pattern has been published by concept publication and funded by ICSSR. I've been associated with IGU, NAGI, ISCA, RGA and other academic associations. I have worked as secretary, editor, vice-president and president of the Rajasthan Geographical Association. I've been felicitated several times by the government and autonomous institutions. Presently I'm guiding Geography researchers unofficially.

Narges Jalili Kolavani

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

EMAIL: NJALILIKOLAV@MUN.CA



Biography

I am Narges Jalili, a master's student in Geography at Memorial University of Newfoundland. My research focuses on the environmental impacts of salmon aquaculture, including issues like farmed fish escapes, and explores the role of policy and technological solutions, such as triploid salmon, in addressing these challenges. I am especially passionate about wild salmon conservation, as preserving these species is essential to maintaining biodiversity and protecting natural ecosystems. In addition to my academic work, I am an event coordinator for the International Professional Network, helping to connect international students here in St. John's. I'm always excited to collaborate with others and discuss innovative approaches to environmental challenges.

Presentation Abstract

“Regulating a ‘fish out of place’: a global assessment of farmed salmon escape policies and frameworks”

NARGES JALILI KOLAVANI, CHARLES MATHER

Memorial University of Newfoundland

The escape of farmed salmon from open net-pens poses significant environmental and socio-ecological risks to marine ecosystems. This study provides an updated assessment of escape management policies across 14 leading salmon-producing regions, focusing on the effectiveness of current regulations in minimizing escapes and their environmental risks. Building on prior foundational research, I examined new and evolving policies in

regions such as Newfoundland and Labrador, Nova Scotia, and New Zealand, alongside established frameworks in regions like Chile and Norway. The analysis reveals a diverse regulatory landscape where containment practices, monitoring requirements, and sanctions that vary in strength and application. While regions with stricter policies demonstrate proactive containment and stronger penalties, most rely on monitoring and reporting mechanisms that fall short of preventing escapes. In other words, most policies and frameworks in production regions have only a limited impact in preventing escapes from happening. Given the weaknesses of existing policies and frameworks, and the inevitability of escapes from open net-pens in the marine environment, this research suggests that the only way to eliminate farmed salmon escapes is to stop farming salmon.

Josh Kurek

DEPT GEOGRAPHY AND ENVIRONMENT, MOUNT ALLISON UNIVERSITY

EMAIL: jkurek@mta.ca



Biography

I'm an Associate Professor at Mount Allison University. I lead the Environmental Change & Aquatic Biomonitoring (ECAB, <https://www.ecablab.com/>) Laboratory. My research program includes aspects of aquatic science, paleolimnology, and monitoring of freshwater ecosystems. I am interested in studying the responses of lakes, rivers, and wetlands to environmental stressors, such as pollution and climate change.

Bright Kwakye

SAINT MARY'S UNIVERSITY

EMAIL: bright.kwakye@smu.ca



Biography

As a Master of Art in Geography student at Saint Mary's University, I am keenly interested in Human Geography and Human Environment Interactions. Thus, I'm particularly concerned about how human activities are distributed across space and also how humans interact with their surroundings. Currently, I am conducting research on rental housing affordability issues among international students in the Halifax Regional Municipality (HRM).

David Lieske

DEPT GEOGRAPHY AND ENVIRONMENT, MOUNT ALLISON UNIVERSITY

EMAIL: DLIESKE@MTA.CA



Biography

David J. Lieske is an Associate Professor in the Department of Geography and Environment, and is the Director of the Mount Allison University Geospatial Modelling Lab (GML). His research expertise encompasses spatial statistical modelling, geographic information systems (GIS), and geovisualization. David is particularly interested in the application of these methods to assist environmental monitoring, mapping and conservation planning. His lab page is here:

<https://arccgis.mta.ca>

Presentation Abstract

“A GIS-based Analysis of Nova Scotia's Coastal Islands”

DAVID LIESKE

Mount Allison University

Islands are unique environments; their uniqueness, combined with relative isolation, contributes positively to biodiversity, by providing a refuge for rare or threatened species, serving as incubators for endemism, and by providing critical breeding, roosting, and haul-out sites for marine mammals. Unfortunately, Islands are often overlooked in coastal management on account of their small size and relative remoteness.

The Canadian province of Nova Scotia, which is bounded by three heterogeneous marine zones, hosts a large number of small, but biologically important islands in its near-shore coastal zone. As a demonstration of the utility of remote sensing (RS) and Geographic Information Systems (GIS) for monitoring island ecosystems, passive and active remote sensing data was compiled and combined with pre-existing GIS data layers to better understand the linkages between topography, land cover, and environmental vulnerability. Topography is strongly associated with dominant vegetation cover, with higher, more steeply sloped islands associated with more forest and less sandy, rocky, wetland land cover types. Unfortunately, ~70% of Nova Scotia's > 3,900 islands are very low-lying (mean elev <2m) and, hence, vulnerable to partial or complete flooding under near-term sea level rise and storm surge scenarios. In places, flood vulnerability is further compounded by vulnerability to erosion. For instance, islands north of the Cobequid-Chedabucto Fault consist largely of unresistant sedimentary rock.

This study illustrates how environmental change can be better understood through integrated RS/GIS data and spatial analysis. It is expected that the products of this analysis will help advance more holistic conservation and management efforts aimed at the ecosystem level and provide big-picture insights into the state and vulnerability of island ecosystems.

Xintao Liu

HONG KONG POLYTECHNIC UNIVERSITY

EMAIL: xintao.liu@polyu.edu.hk

Biography



Dr. Xintao Liu is an Associate Professor in the Department of Land Surveying and Geo-Informatics at The Hong Kong Polytechnic University. He obtained his PhD in Geoinformatics from the Royal Institute of Technology in Sweden, and then worked as a postdoctoral fellow and sessional lecturer at Toronto Metropolitan University in Canada. His research primarily focuses on GIScience, complexity science, and geography, with the aim of leveraging modern technology to improve the quality of urban life and advance smart city development. He has received funding from various scientific research organizations, including the NSFC, Hong Kong RGC, Hong Kong ITF, and Hong Kong PPR Funding Programs. He serves as the Chair of the Commission on Geographic Modeling and Analysis for the International Cartographic Association (ICA) and the Managing Editor of the journal *Urban Informatics*.

Presentation Abstract

“Exploring human activities in cyber-physical spaces” (Lightning Talk)

XINTAO LIU

Hong Kong Polytechnic University

With the rapid pace of urbanization and the rise of intelligent technologies, human activity patterns are becoming increasingly diverse. These activities are no longer confined to the physical spaces people inhabit; online cyber spaces have become a significant and integral part of daily life. In this context, this report explores

methods for perceiving human activities in integrated cyber-physical spaces, extracting human activity chains within these spaces, and analyzing network construction based on these activities. The accelerated urbanization process, frequent mass migrations, and the intensification of human activities and mutuality both online and offline present new challenges for urban science.

Ana Beatriz Lopez

UNIVERSITY OF WATERLOO

EMAIL: ablopezf@uwaterloo.ca



Biography

Ana B. Lopez is a passionate environmental advocate completing her Master's in Sustainability Management at the University of Waterloo (Canada), with a dual MBA degree from ESADE Business School and Adolfo Ibanez University and a Bachelor's degree in Communication Sciences and Public Relations from the University of Costa Rica. Born in Costa Rica, Ana brings a diverse background in business administration and marketing, with two decades of work experience in the packaging industry. Her passion for conservation and extensive travelling throughout her career has led her to explore the intricate relationships between human geography, sustainability, and business management, particularly in the context of tourism, a major field in her home country. Ana is interested in the behavioural responses of ski tourists to climate change, and the perceptions of snowmaking as an environmentally sustainable adaptation strategy. Ana is committed to leveraging her insights and business background to drive meaningful climate action and foster a deeper understanding of how perceptions can drive environmental action.

Presentation Abstract

“Perceptions and acceptance: skier responses to climatic conditions and snowmaking as an adaptation strategy” (Cancelled)

ANA BEATRIZ LOPEZ FRANCO, and MICHELLE RUTTY
School of Environment, Enterprise and Development (SEED)

Ski tourism is predicated on low temperatures and natural snowfall, with climate change directly impacting the multibillion-dollar ski industry. Limited research has explored how skiers are (or will) respond to changing snow conditions, with an absence of research on

skiers' perceptions of snowmaking as an environmentally sustainable adaptation strategy. This presentation will examine Canadian skiers' behavioural responses the record-warm 2023–2024 winter, which resulted in a significantly disrupted ski season, including a delayed start and an early end to the season. Using an online survey administered to active skiers and snowboarders across Canada from March through June 2024, a total of 209 surveys were collected and analyzed. The results reveal that skiers have a high tolerance for marginal conditions (e.g., 57% would ski regardless of snow coverage), with most (57%) opting to skiing less often (i.e., temporal substitution) versus a spatial (i.e., travelling elsewhere) or activity substitution (i.e., stop skiing) in 2023–2024. The majority (80%) are concerned about climate change negatively impacting current and future ski conditions, with a robust link between reported (or actual response) and projected future behaviour, suggesting a high reliability of using past behaviours to predict future intentions. Although 90% agreed that snowmaking is necessary and over 80% agree snowmaking capacity must increase in the next five years, there were high levels of uncertainty about the environmental sustainability of this climate adaptation strategy (e.g., over 35% believe it is a significant source of emissions and a contributor to climate change).

Dave MacLean

CENTRE OF GEOGRAPHIC SCIENCES (NSCC-COGS)

EMAIL: David.MacLean@nsc.ca



Biography

GIS Faculty at the Centre of Geographic Sciences (NSCC-COGS). I teach GIS technologies to grad-level students in our nine-month GIS Graduate Certificate program (& others). Interests? Take a look at <https://isspix.com/ISS072/>!

John Marsh

UNIVERSITY OF TRENT

EMAIL: JMARSH@TRENTU.CA



Biography

I graduated from Reading University, University of Alberta and University of Calgary, then was a member of the Geography Department at Trent University for 31 years. I also served as a consultant internationally, nationally and locally. Now retired I continue research, writing and involvement in nature conservation, heritage, trails and tourism with special emphasis on the Canadian Rockies, the Peterborough area and Chile.

Mahyar Masoudi

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

EMAIL: mahyar.masoudi@mun.ca

Biography



I am an urban ecologist and climatologist dedicated to enhancing the environmental and ecological performance of cities by optimizing their spatial patterns, including green, blue, and grey infrastructure, to promote the health and well-being of urban populations. My research incorporates a social justice lens, examining how various groups experience different environmental conditions. I primarily use technologies such as GIS, remote sensing, and spatial data analytics to bridge scientific findings with actionable insights, supporting urban planners and policymakers in creating more sustainable and equitable cities.

Presentation Abstract

“Assessment of the Influence of Spatial Scale and Type of Land Cover on Urban Landscape Pattern Analysis Using Landscape Metrics”

MAHYAR MASOUDI¹, DANIEL R. RICHARDS², PUAY YOK TAN³

¹Memorial University of Newfoundland

²Manaaki Whenua -- Landcare Research, Lincoln, New Zealand

³National University of Singapore

Landscape metrics are widely used to measure the spatial pattern of landscapes. However, there are important gaps in their application. For instance, landscape metrics are sensitive to the spatial scale of analysis (i.e., extent and resolution) but while the influence of extent and resolution has been previously studied, their interaction has rarely been studied. In addition, studies assessing the influence of spatial scale on landscape metrics have scarcely paid attention to the impacts of

land cover on this assessment, which reduces the generalizability or comparability of studies. Furthermore, as there are numerous landscape metrics that have been developed, these metrics exhibit degrees of correlation. Considered together, these limitations make it challenging to compare results across studies and form synthesis. We suggest that identifying a parsimonious set of metrics to promote comparability of studies will be desirable. We used Singapore as a case study to analyze how 11 commonly used landscape metrics responded to changing extents (ranging from 60 m by 60 m to 1200 m by 1200 m) in relation to resolution (Landsat 8, Sentinel-2, and WorldView-3) and land cover (vegetation and impervious surface). We used principal component analysis to identify bundles of metrics and recommend a set of common metrics across a combination of extent-resolution-land cover combinations. We highlight key observations from the study: 1) the response of all metrics to changes in spatial scale and land cover can be modelled with reasonable accuracy (indicated by model performance: $R^2 > 0.8$); 2) different types of mathematical functions (e.g., linear, logarithmic) were found suitable for the response curve of metrics, suggesting different metrics responded differently to changing scales; 3) a consistent pattern of change for individual metrics was observed across extents, resolutions, and land covers; and 4) four metrics, PLAND (the proportional area of a landscape occupied by a certain land cover, expressed as percentage), SHAPE_AM (indicates the geometrical shape complexity of patches of a given land cover), PD (indicates the number of patches of a certain land cover type per hectare of the landscape that is an indication of the fragmentation level), and ENN_AM (indicates how close the patches of a certain land cover are in relation to one another), can adequately explain the spatial pattern across the studied extents, resolutions, and land covers. Our findings advance the knowledge of and promote comparability of studies on spatial pattern quantification using landscape metrics.

Patricia Matsumoto

SAINT MARY'S UNIVERSITY

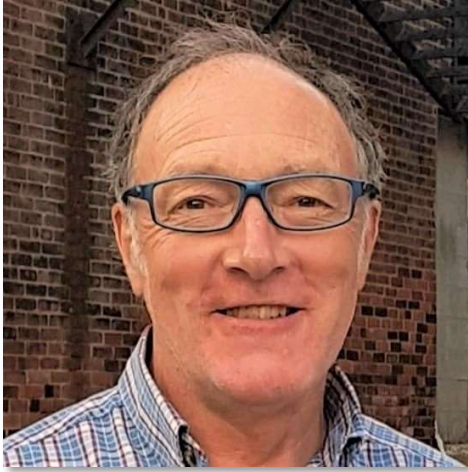
EMAIL: PATRICIA.MATSUMOTO@SMU.CA



Hugh Millward

SAINT MARY'S UNIVERSITY, DEPT. OF GEOGRAPHY AND ENVIRONMENTAL STUDIES.

EMAIL: H_MILLWARD@HOTMAIL.COM



Biography

Professor Emeritus of Geography and Environmental Studies at Saint Mary's University, Halifax, NS. My research interests are in urban geography and urban planning generally, and more specifically in land-use, activity travel, and active transportation. I also have published on rural geography topics and the geography of Nova Scotia.

Ainsley Mutrie

THOMPSON RIVERS UNIVERSITY

EMAIL: AINSLEY.MUTRIE@GMAIL.COM



Biography

Hi I'm Ainsley and I'm from Kamloops BC completing my final semester of Physical Geography and Environmental Studies from Thompson Rivers University. I love Hydrology and Climatology but nerding out about rocks & Geology is what my friends know me for. I haven't attended a conference in a while and look forward to what is presented and discussed this year.

Samira Norouzi

MEMORIAL UNIVERSITY OF NEWFOUNDLAND

EMAIL: snorouzi@mun.ca



Biography

Hello!

I'm Samira Norouzi, currently pursuing my Master's degree at Memorial University. My research is centred on exploring how urban nature (e.g., street trees, urban parks, regional and national parks) can play a pivotal role in shaping cities that are not only healthy and resilient but also just. To achieve this, I employ quantitative methods including spatial analysis.

Presentation Abstract

“Exploring the spatial distribution of green spaces in medium-sized Canadian cities using an environmental justice lens”

SAMIRA NOROUZI, MAHYAR MASOUDI
Memorial University of Newfoundland

Compelling evidence demonstrates that green spaces provide essential benefits for city dwellers. However, research shows that in some urban areas, the distribution of green spaces and their benefits is unequal across different population groups. For instance, it has been repeatedly observed in Canadian cities that green space coverage is lower in neighbourhoods primarily inhabited by low-income people and certain ethnic communities, such as Indigenous people and immigrants. However, almost all existing evidence is from large cities, including in Canada. As small and medium-sized cities (SMCs) have their own distinct contexts, the results from larger cities may not be applicable to these communities. Additionally, the growing population of SMCs in Canada necessitates conducting research to better understand patterns of environmental inequality. Combining methods from remote sensing and geospatial analysis

and utilizing Canadian Census data, this study will investigate whether there is an environmental inequality relating to the distribution of green spaces across 13 communities comprising the St. John's Census Metropolitan Area. Identifying existing patterns of inequality in smaller communities is a first step and can inform future research and urban planning efforts to ensure that all city dwellers have equal access to these vital resources and the benefits they provide.

Keywords: Green spaces, environmental justice, equality, ecosystem services, St. John's

Kailey Nichols

SAINT MARY'S UNIVERSITY

EMAIL: KAILEY.NICHOLS@SMU.CA



Biography

I'm a MSc student based out of Saint Mary's University in Halifax. My background is in coastal restoration monitoring, with a particular emphasis on leveraging GIS and remote sensing techniques. My MSc research is based on using these tools to evaluate the effectiveness of traditional machine learning models against deep learning using multi-temporal, multispectral drone imagery.

Mathew Novak

SAINT MARY'S UNIVERSITY

EMAIL: M.NOVAK@SMU.CA



Biography

Mathew Novak employs Geographic Information Systems (GIS) in his research to track the development of the urban environment, focusing on changes to residential and retail landscapes in the evolving North American context. His research interests and methods are diverse, including modeling historical disasters, tracing shopping patterns, and identifying social dynamics in high-density residential districts. At Saint Mary's he teaches courses on Urban Geography, Planning, The Built Environment and GIS where he also coordinates the MA Geography Program and directs the Wicked Problems Lab.

Megan O'Brien

SAINT MARY'S UNIVERSITY

EMAIL: MEGAN.OBRIEN@SMU.CA



Biography

I am currently a Masters student in Geography at Saint Mary's University. Prior to my time at SMU, I completed my undergraduate degree at Dalhousie University in marine biology, and my diploma in GIS & cartography at the Centre of Geographic Sciences (COGS). My current work focuses on improving the Nova Scotia old-growth forest potential index, which aims to identify old forest conservation opportunities on Crown land in the province. My work employs remote sensing technology to more accurately identify potential old-growth, including multi-spectral imagery and LiDAR.

Presentation Abstract

“A New Old-Growth Potential Index for Nova Scotia”

MEGAN O'BRIEN

Saint Mary's University

Old-growth forests in Nova Scotia provide ecological functions including carbon sequestration, nutrient cycling, genetic diversity, and habitats for species at risk. The mandate to protect old-growth forests in Nova Scotia has long been recognized; however, identifying potential old-growth stands in the field remains challenging. To guide current field work, an old-growth forest potential index has been created which relies on photo-interpreted forest inventory data to generate old forest potential values. Remotely sensed data has been shown to be effective in predicting forest maturity attributes, and can improve upon some of the uncertainty associated with photo-interpretation. The goal of this study is to compare the predictive ability of a combination of remotely sensed metrics and generate a new province-wide old-growth potential index. We will combine data from multispectral imagery (Sentinel-2), Airborne Laser Scanning (ALS), and ecological variables to identify potential old-growth forest stands. Multispectral imagery will be used to extract vegetation indices, textural values, and species information. Species identification may help to address the unique challenge of mapping old-growth forest on a provincial scale within a

variety of distinct ecoregions. ALS features will be assessed for their suitability in predicting old-growth forest characteristics, and appropriate ALS-derived attributes will be selected. Improved classification can benefit conservation efforts and forest management by focusing field identification resources and sharpening our understanding of where we might find old forests in Nova Scotia.

Jeff Ollerhead

MOUNT ALLISON UNIVERSITY

EMAIL: jollerhead@mta.ca



Biography

Dr. Jeff Ollerhead is a Professor in the Geography and Environment Department at Mount Allison University (Sackville, NB, Canada). He is a coastal geomorphologist who studies beaches, coastal sand dunes, salt marshes and mudflats. In recent years, he has been particularly involved in designing and monitoring salt marsh restorations in the upper Bay of Fundy.

Lynn Palmer

MOUNT ALLISON UNIVERSITY

EMAIL: LPALMER@MTA.CA



Biography

Faculty Lecturer at Mount Allison U for Traditional Ecological Knowledge and at Lakehead University for Indigenous Peoples & Natural Resources. Forests & Regional Policy Specialist at Wildlife Conservation Society of Canada – focused on national forests policy and policy in the region of Ontario's northern boreal, including for environmental/impact assessment. Part time Environmental Policy Specialist at Four Rivers, Matawa Environmental Services Group, Matawa First Nations Management (Thunder Bay, Ontario).

Jonathan Pierre

UNIVERSITE LAVAL

EMAIL: JOPIE8@ULVAL.CA



Biography

Doctoral student.

Christopher Randall

TORONTO METROPOLITAN UNIVERSITY

EMAIL: C3RANDALL@TORONTOMU.CA



Biography

My research draws on natural hazards literature to better conceptualize the social, political, and economic factors involved in the production of flood risk. I use multiple and mixed methods, such as historical geographic materialism and semi-structured interviews, to mobilize equitable climate adaptation. Prior to my MASc, I completed a Bachelor of Arts in Environment and Urban Sustainability at TMU and held research assistantships investigating flood risk, resilience, and environmental rewards on Toronto Islands.

Presentation Abstract

“Flood risk, colonial capital, and the co-production of environment and economy in Vancouver”

CHRISTOPHER RANDALL

Toronto Metropolitan University

Vancouver’s waterfront has been dramatically transformed by the reciprocal and complementary development of its economy and environment. From a resource town to a global city, these changes occurred rapidly following the commodification of nature by colonial capital. The physical environment, including Vancouver’s deep-sea port, facilitated both the city’s early resource extraction and today’s valuable access to environmental rewards; one cannot understand the development of the city without understanding its unique relationship with the Salish Sea, Fraser River, and Coastal Mountains. This presentation traces five key periods of transformation in Vancouver’s social, economic, and

physical restructuring: 1) the early biophysical landscape and initial contestations over space; 2) Vancouver's incorporation and creation of a commercial metropolis; 3) Fordist and wartime industrial innovation; 4) Keynesian public investment in economic growth; and 5) neoliberalism and the 'livable city'. This presentation argues that 'recurrent restructuring' in Vancouver has been co-produced by the environment and economy through flows of capital, colonization, and their cultural reverberations. Flood risk management has been incorporated into these temporal transformations, initially a state responsibility that has today been eroded under neoliberal flood risk governance. From the diking of floodplains to create farmland to their modern-day occupation by condominiums, adaptation to flood is embroiled in a complex web of historical environment-economy-society dialectics. This study has implications for local adaptation planning across Canada and offers a theory-building opportunity for critical adaptation literature.

Apoorva Rathod

CONCORDIA UNIVERSITY, MONTREAL, CANADA

EMAIL: APOORVA.RATHOD@MAIL.CONCORDIA.CA



Biography

Apoorva Rathod (she/her) is a human geographer based in Moncton, NB. She is currently completing her postdoctoral fellowship at the interdisciplinary Centre for Engineering in Society, Concordia University, where she is researching the gendered and classed effects of transport infrastructures built to promote sustainable mobility. Her other research and teaching interests are the geographies of health and wellbeing, planetary urbanization and urban geographies, scalar impacts of sociotechnical systems, and sustainability transitions.

Jana Schluenss

UNIVERSITÉ DU QUÉBEC EN OUTAOUAIS

EMAIL: SCHJ06@UQO.CA



Biography

I'm Jana Schluenss, a human geographer passionate for human-environment relationships, and currently a PhD student in interdisciplinary environmental sciences at the Université du Québec en Outaouais. I am part of the Canada Research Chair in Ecological Economics, and I'm particularly interested in how people attribute meaning and importance to nature. I engage with plural values assessments from a social science perspective. Throughout my research, I ask myself how the multiple ways we relate to "nature" can inform decision-making.

In addition to my studies, I also have over ten years of practical experience in coastal ecosystem management and international collaboration as president and coordinator of environmental projects for a small NGO working in Ecuador and Germany. I have also worked on habitat connectivity and environmental education.

Presentation Abstract

"The Lake Saint-Pierre - a contested environment of plural values"

JANA SCHLUENSS, JÉROME DUPRAS

Université du Québec en Outaouais

Freshwater ecosystems are under increasing pressure. From a value perspective, this pressure is closely related to a too narrow definition of nature's values in decision-making. Assessing plural values that encompass not only economic factors, but a variety of different

value dimensions, such as socio-cultural and intrinsic values, is imperative to achieve transformative change. Nevertheless, assessment and consideration of multiple values is still scarce.

To promote a perspective of plural values in environmental decision-making, we assessed multiple values that people attribute to Nature's Contributions to People (NCP), and how these values are affected by environmental degradation. We conducted semi-structured interviews with local stakeholders in a case study in the St.-Lawrence River in Southern Quebec, Canada.

We orient our analysis along the conceptual framework of multiple value dimensions of the IPBES (Intergovernmental Panel on Biodiversity and Ecosystem Services), which differentiates between intrinsic, instrumental, and relational values. Based on the value assessment, we identified narratives about human-nature relationships, and implications for decision-making that come along with these prevailing worldviews.

Our results show a strong discourse of human-nature dichotomy, accentuating the perceived opposition of instrumental and intrinsic values. This opposition comes along with narratives of fragility and wilderness that has to be protected from human influence. Relational values were strong in participants discourses, but not represented in actual decision-making processes. Our findings suggest that the identified relational values and related concepts, such as environmental justice and equity concerns, need to be emphasized in policy-making to ensure an inclusive and sustainable management of aquatic ecosystems.

Stewart Semple

DALHOUSIE AND MOUNT ALLISON (RETIRED)

EMAIL: SSEMPL@MTA.CA



Biography

Geographic education.

Kyara Simoes

UNIVERSITY OF WATERLOO

EMAIL: KSIMOES@UWATERLOO.CA



Biography

With an unconventional introduction to sustainability through an undergraduate degree in kinesiology, I have developed a deep understanding of human movement and performance, which I now apply to addressing broader environmental challenges. Currently, I am pursuing a Master of Environmental Studies at the University of Waterloo, where my research focuses on assessing the climate change readiness of Canadian sports organizations. This research examines how these organizations can better prepare for and adapt to the increasing climate risks that threaten the operations and long-term viability of their respective sport. Through my work, I aim to develop adaptive strategies that not only promote sustainability but also enhance the resilience of the sports sector. These strategies are designed to help organizations mitigate climate-related impacts (e.g., increasing health risks for athletes, damage to sports infrastructure, disruptions to training and competition schedules), reduce their carbon footprint, and implement long-term transitions toward more sustainable practices.

Presentation Abstract

“Assessing Climate Change Readiness in Canadian Sport Organizations: A Case Study of Atlantic Canada” (Lightning Talk)

KYARA SIMOES, DANIEL SCOTT and MICHELLE RUTTY

University of Waterloo

Sport is and will continue to be impacted by climate change, with warming temperatures and extreme weather events disrupting training and competition schedules, increasing health risks for athletes, coaches, and spectators (e.g., heatstroke, dehydration, heat exhaustion), as well as impacting sports infrastructure (e.g., damage to playing surfaces, flooding of facilities). Many sports and sporting events are also significant contributors to greenhouse gas emissions, with sport governing bodies facing mounting pressure to utilize their significant resources and influence to respond and adapt to climate change. Through an analysis of public documents, including annual reports, strategic plans, sustainability publications, and website content, the proposed presentation explores how sport organizations in Atlantic Canada have (or have not) considered climate change risks, including mitigation and adaptation strategies. The findings reveal a concerning lack of preparedness within the regional and national sports sector, highlighting the urgent need for climate risk assessment and climate action. The presentation will also discuss the critical importance of how sport governing bodies (e.g., Sport Canada, Multisport Service Organizations, National Sport Organizations, Provincial Sport Organizations), are (or are not) addressing climate change, including their commitment to sustainability and athlete safety.

Araby Smyth

MOUNT ALLISON UNIVERSITY DEPARTMENT OF GEOGRAPHY & ENVIRONMENT

EMAIL: ASMYTH@MTA.CA



Christopher Sorio

YORK UNIVERSITY

EMAIL: PSORIO@YORKU.CA



Biography

My name is Christopher C. Sorio, a retired manufacturing worker with many years of community mobilization and activism related to migrant and labour rights. I am pursuing MA in Geography at York University because of critical human geography's concern with using action, reflection and empowerment (individual and collective) in order to challenge oppressive structures. I believe that my activism, and collaboration in numerous research projects, have provided a set of skills and experiences that I can transfer to an academic research project of my own.

My proposed research project will relate to the issues and challenges of precarious Filipino workers in Canada. I have two potential projects in mind. One would relate to the emerging role of Filipino seafarers on Canadian flagged fishing, cargo and cruise vessels. In March 2023, a reciprocal arrangement between Canada and the Philippines recognized Philippine certificates of competency for Filipino sailors known as Standard for Training, Certification, and Watchkeeping for Seafarers (STCW). This means that Filipino sailors will be able to work on Canadian-flagged vessels with a work visa and will likely lead to a new area of work for precarious Filipino migrants in Canada. My research would be the first to examine this labour market niche and would explore the working conditions, disciplinary mechanisms and activism/agency around such employment.

Presentation Abstract

“Best Before Date: 2nd Feb 2024“ The Breakdown of Protections for Precarious Workers in the GTA: The story of Del Monte in Oshawa ”

CHRISTOPHER SORIO

York University , Faculty of Environmental and Urban Change

Graeme Stewart–Robertson

FUNDY REGIONAL SERVICE COMMISSION

EMAIL: gstewartrobertson@fundyregion.ca



Biography

Graeme Stewart–Robertson is an environmental geographer, artist, and project manager living and working on the east coast of Canada. For the past decade, he has brought his range of expertise in project management to support the vital role Indigenous and local communities in Canada and around the world play in protecting and safeguarding land and seascapes essential to global conservation goals. He currently works as the Manager of Policy and Research for the Fundy Regional Service Commission. Graeme maintains an artistic practice in contemporary photography, geographic representation, and digital imaging.

Cristian Suteanu

SAINT MARY'S UNIVERSITY

EMAIL: CRISTIAN.SUTEANU@SMU.CA



Biography

Dr. Cristian Suteanu is a Professor at Saint Mary's University, cross-appointed in the Dept. of Geography and Environmental Studies and in the Dept. of Environmental Science. On the one hand, his research focuses on the analysis and modelling of physical processes in Earth- and environmental sciences. On the other hand, he studies epistemological aspects of our relations with the environment. Throughout his career he has been deeply involved in the realm of learning and education seen as fundamental features of what it means to be human. His courses include Environmental Information Management, Statistical Methods in Geography, Natural Hazards, Environmental Pattern Analysis, as well as graduate courses on nonlinear approaches to natural complex systems. He is the author of 'Scale - Understanding the Environment' (Springer, 2023).

Presentation Abstract

"Assessing climate-change-related pattern change: insights regarding wind speed variability"

CRISTIAN SUTEANU

Saint Mary's University, Dept. of Geography & Env. Studies and Dept. of Env. Science

Climate change has major implications for a wide range of patterns of environmental variables. In order to capture such changes, methodological adaptations must be taken into consideration. Methodological renewal can fruitfully start with the definition of key concepts. This paper shows that defining 'patterns' in a way centred on aspects of invariance can (i) lead to valuable information regarding the necessary characteristics of datasets referring to temporal patterns, and (ii) support in-depth pattern analysis using methods that are capable of producing representations of notable practical and theoretical significance. The resulting methodological framework is presented along with practical application examples regarding wind variability considered on multiple time scales.

Lana Vuleta

MEMORIAL UNIVERSITY OF NEWFOUNDLAND AND LABRADOR

EMAIL: LJVULETA@MUN.CA



Biography

Hi all. I'm Lana (they/them). I'm a settler from the traditional unceded and unsundered territory of the Anishinabe Algonquin Nation. I've moved to the ancestral homelands of the Beothuk and the Mi'kmaq, the island of Newfoundland, to do my MSc at CLEAR (Memorial University of Newfoundland and Labrador) as part of the Nunatsiavut plastic pollution monitoring project co-led by Liz Pijogge (Nunatsiavut Government) and Max Liboiron (MUNL). My research comes out of community questions regarding how spring ice melt around Nunatsiavut impacts plastic bioavailability; I and other researchers are examining sea and lake ice near Nain, Nunatsiavut for plastics. The data visualizations that come out of the ice plastics research will serve as a basis for discussing the principles of relevant and accessible data visualizations with community members.

The picture of me canning snow was taken by Paul McCarney near Nain, Nunatsiavut, on Labrador Inuit Lands. No pectin was used in the canning process.

Presentation Abstract

“Beyond-random subsampling of potential plastic particles from the ice near Nain, Nunatsiavut”

LANA VULETA

Memorial University of Newfoundland and Labrador

Examining environmental media for the existence of plastics can yield potential plastic counts on the order of hundreds to thousands of particles, often necessitating particle subsampling. While subsampling methods vary across media and particle analysis methods, most current research on samples processed through suction filtration recommends

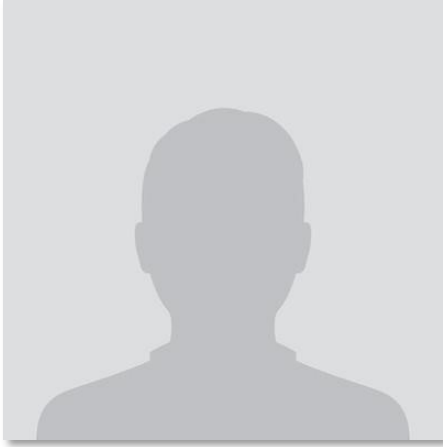
random subsampling as the most reliable approach for balancing practical constraints with research objectives.

In this presentation, I will discuss the subsampling method selected by myself and collaborators for examining ice near Nain, Nunatsiavut for the existence of plastics. Our approach complements random sampling with targeted judgemental sampling of particles of particular interest. I will explain how community questions guided our sampling decisions and will discuss the plastic identification process that enabled effective judgemental sampling. While the results of this research are still pending, we anticipate that this complementary approach will gather specific information relevant to addressing community questions about plastics in the environment while maintaining the representativeness of random sampling.

Tom Waldichuk

THOMPSON RIVERS UNIVERSITY, KAMLOOPS, BC

EMAIL: TWALDICHUK@TRU.CA



Biography

I teach human geography, including environmental geography, at Thompson Rivers University in Kamloops, BC. My main geographic area of interest is Japan. Thematically, I am interested in geographic education, especially field trip education and virtual field trips, the rural-urban fringe, and education for sustainable development.