



# ***Book of Abstracts 'Critical Geographies'***

**CAGONT 2014  
October 24-25**

The Canadian Association of Geographers-Ontario Division (CAGONT) is holding its 2014 Annual Meeting from Oct 24-25, 2014 at York University. The Department of Geography is hosting the meeting. This document contains the paper and poster abstracts that are part of the CAGONT 2014 program. The author(s) are solely responsible for the content of their abstracts. Abstracts are listed alphabetically by the lead author's last name.

Note that this book is not in print format.

**CAGONT**

Canadian Association of Geographers - Ontario Division



**York Distinguished Alumni and CAGONT Keynote:**  
***Jennifer Keesmaat (Chief Planner, City of Toronto)***



**“MASSIVE CONVERGENCE”**

Over the past decade Jennifer has been repeatedly recognized by the Canadian Institute of Planners and OPPI for her innovative work in Canadian municipalities. Her planning practice is characterized by an emphasis on collaborations across sectors, and broad engagement with municipal staff, councils, developers, business leaders, NGO's and residents associations. Her priorities include implementing a divisional strategic plan, leading an Official Plan review process, refining public consultation to provide more access to city building conversations, transit planning, midrise development on the City of Toronto's many avenues, and overseeing development review for over 4000 applications annually. Jennifer is a graduate of the University of Western Ontario (combined honours English and Philosophy) and has a Master in Environmental Studies (Politics and Planning) from York University.

***Opening Plenary Speaker:***

***Katherine McKittrick, (Women's Studies, Queen's University)***

**“On Undisciplined Black Geographic Thought and Deep Middle Passage Electronica”**



The paper discusses the promise of interdisciplinarity in relation to geographic thought. Looking specifically at the links between black studies and black geographies, the paper argues that scholarly interdisciplinary praxes opens up epistemological innovations that enrich the study of blackness and other spaces of marginalization. The paper thinks about these themes in relation to black electronica improvisation and middle passage geographies.

## Dreamtroit to Deadtroit

**Abbas, Alia (York University)**

**Johnson, Angela (York University)**

The paper will focus on a case study completed by myself on the city of Detroit, Michigan. It will discuss the city's recent declaration of bankruptcy and state of emergency. It will examine the recent economic development strategies for Detroit. The session will also look at the role of economic developers and the dire need for a collaboration between geographers and economic developers. Furthermore it will discuss in detail what role geographers play in economic development.

## "Build Toronto" (Not Social Housing): Neglecting the Social Housing Question in a Competitive City Region

**Abbruzzese, Teresa (York University)**

This paper critically examines the sociospatial articulations and particular housing geographies that neoliberalism has produced in the City of Toronto and its surrounding suburbs, a region known collectively as the Greater Toronto Area (GTA). It focuses, in particular, on the contradictions inherent in the neoliberal practices, institutions, and policies that have been shaping the competitive GTA region at the global scale. I argue that recent priorities in urban policy-making fall short of producing the “quality of life” package that neoliberal stakeholders constantly allude to and that, ultimately, hinges neither on neoliberal discourses or competitive ideologies but on the production of an environmentally, economically, and socially sustainable region. An examination of the continuing contradictions unleashed by a retreating state during the neoliberal shift in Canadian cities shows how growing underinvestment in urban infrastructure, transit systems, and affordable housing is actually constraining rather than enhancing today’s neoliberal supporters’ calls for “competitive growth.” Public goods, such as social housing, are key urban policy areas that have suffered as a result of government devolution. The paper has two main sections. The first discusses the neoliberal contradictions of competing regionalisms in the City of Toronto and its surrounding suburbs in what I label the “Four Rs” that characterize Toronto’s entrepreneurial approach to metropolitan governance. The second section begins by setting the context of the Greater Toronto Area’s (GTA) housing crisis through an examination of its structural underpinnings in housing policy at both the federal and provincial levels of government. Then, I examine the regionalization of housing affordability in Toronto and its inner and outer suburbs. My aim here is to uncover how the hegemonic logic of privatization, coupled with social engineering strategies to deconcentrate poverty, are territorial or place-based responses to wider systemic issues of increasing socioeconomic inequality in the region. I point not only to the limitations of place-based policies in dealing with the structural roots of poverty at the regional level, but also the shortfalls in these policies when it comes to recognizing the destructive consequences of such territorial responses on communities and neighbourhoods.

**Keywords:**

Housing, inequality, Toronto, Regionalism

Village networks and traditional agriculture in the District of Mazan,  
Napó river, Peruvian Amazon

**Abizaid, Christian (University of Toronto)**  
**Takasaki, Yoshito (University of Tsukuba)**  
**Coomes, Oliver T. (McGill University)**  
**Pablo Arroyo Mora (McGill University)**

Social networks facilitate access to productive resources and information that are key to peasant livelihoods and natural resource use. To date, studies on social networks in Amazonia have examined within-community social networks. This paper reports on initial findings from a study on village networks in the Peruvian Amazon. We use data from 69 rural communities along the Napó river (District of Mazan), collected as part of the Peruvian Amazon Rural Livelihoods and Poverty (PARLAP) Project, to examine the structure and spatial distribution of village-level networks (soccer, seeds, labor, and trade), based on key village characteristics (i.e., access to different land types and village, age, size and ethnic denomination). Implications for our understanding of traditional agriculture and livelihoods in Amazonia are discussed.

**Keywords:**

social networks, agriculture, indigenous and folk peoples, Amazonia.

## Pollution, as a seeing landscape

**Acara, Eda (Queen's University)**

“Landscapes that see through rather than a landscape to watch” (“Seyredilecek Manzara Değil, Seyreden Bir Manzara”), an expression arguing for reflexive methodologies of landscape visualities by sociologist Ulus Baker is the core inspiration of this presentation. My paper focuses on how research field photographs can serve as a reflexivity practice in seeing through complex landscapes of power within the context of ‘environmental pollution’. Thus, I examine how, from where (which site?) and why I take specific field photographs and how such an exploration is reflected back at my work. This presentation is a byproduct of my dissertation field trip that is about community constructions of water pollution in Ergene River by different ethnic groups. The Ergene River, a tributary of the Meric (Maritza) River, which crosses the border between Bulgaria, Greece, and Turkey, is considered a ‘dead river’, with the highest level of pollution.

**Keywords:**

reflexivity, visual methodologies, landscapes of environmental pollution

# Contested Landscapes of the Female Gaze: Self-Portraits as Resistance to Gender Oppression

**Alice, Christine (Brock University)**

This paper explores how women's self-portrait photography could be interpreted as resistance to intersectional oppressions, in particular, hetero-patriarchal oppression. By combining visual methodologies with feminist geographic theory, I will look at self-portraits by Claude Cahun, Francesca Woodman, and Cindy Sherman in order to understand contested representations of gender. Interpreting women's self-portraits as a re-visioning of the self within various spaces and scales acknowledges the possibility of resistance in everyday life. Reinterpreting "the female gaze" might provide us a way to look at self-portrait photography as a way to subvert the sexualized male gaze and contest complexities of power relations. Self-portraits as performance and remaking of the self could contribute to our understandings of female subjectivity. The act of placing the self outside the body with the photograph might allow for a new reading of gender binaries and what constitutes the self, in particular, the female self within a male dominated world.

**Keywords:**

Gender, feminist geography, subjectivity, self-portraits

## Native Trees in Carolinian Canada: Questioning their role in urban forest management plans

**Almas, Almas (University of Toronto)**

**Conway, Tenley (University of Toronto – Mississauga)**

Throughout North America, municipalities are investing in their urban forests based on their numerous ecological, social, health and economic benefits. Municipal urban forest management plans have become the defining document behind strategic urban forest management and as such, these plans hold the potential to shape the urban forest for years to come. Municipalities' urban forest management plans in the Carolinian Zone of Ontario all emphasize the role of native species, including target levels for their composition in the urban forest. However, current debates regarding ecosystem integrity, assisted migration, potential benefits of non-native species, and biodiversity raise questions about the benefits of focusing on native species in an urban forest. Additionally, the likelihood of reaching native planting targets, given the constraints of urban areas, is typically not discussed. This study explores the rationale given by each municipal urban forest management plan when addressing native species distribution and use when planting, and examines if native species are preferred to non-native species within each respective municipality. Ten urban forest management plans from Carolinian Zone municipalities were acquired, reviewed and compared using a matrix, which shows a clear preference for native species in all ten municipalities. However, recommended planting practices for municipal staff and residents to achieve the stated goals of the urban forest management plans are notably absent. While all ten urban forest management plans emphasize the use of native trees and their intrinsic benefits, they all lack specificity and operational clarity. An important next step in the development of these plans is to include best management practices for accomplishing their specified goals. More broadly, this study is the first part of my research examining native species management in urban ecosystems, including attitudes and practices of municipalities and residents.

## Modelling biophysical and carbon dioxide exchange properties in the Canadian Arctic using soil-adjusted vegetation indices

**Amundsen, Briac (Ryerson University)**

**Atkinson, David M. (Ryerson University)**

**Treitz, Paul (Queen's University)**

High resolution remote sensing data can be used to quantify, assess and predict Arctic vegetation and ecosystem carbon dioxide (CO<sub>2</sub>) exchange properties. Most studies have used the Normalized Difference Vegetation Index (NDVI) with a relatively high degree of success. However, in harsh environments such as the Arctic, low vegetation cover and varying degrees of exposed soil have the potential to falsely increase NDVI values, reducing confidence in results. In this study, ten soil-adjusted vegetation indices are calculated from high spatial resolution IKONOS data covering two distinct Canadian Arctic sites. Using linear regression, soil-adjusted vegetation indices and NDVI are compared for their ability to accurately model biophysical variables. Results indicate that, in the High Arctic, soil-adjusted vegetation indices reduce soil noise effectively and outperform NDVI ( $r^2$  values of 0.87 and 0.84 respectively for modelling percent vegetation cover). However, results from the Mid Arctic study site indicate the reverse with NDVI outperforming soil-adjusted vegetation indices for percent vegetation cover ( $r^2$  values of 0.80 and 0.77 respectively). Thus, the benefits of using soil adjustment in remote sensing derived vegetation indices appear to be site-specific and dependent on latitude, climate and associated degrees of exposed soil.

### **Keywords:**

Arctic, remote sensing, Normalized Difference Vegetation Index (NDVI), soil-adjusted vegetation indices

Geographical Videography: some philosophical reflections on an emerging medium.

**Anderson, Richard (York University)**

Video is an emerging and rapidly expanding medium for geographical research and teaching. It is filled with interesting possibilities, and seems to offer vivid and interesting ways in which the world can be represented. But video is a medium with creators, who make choices about what to film and record, and what to edit and compose. Its footage of the world is mediated through film and editing equipment. Video has audiences, whose expectations often structure the way in which video is filmed and composed. As the medium emerges in geography it is time to reflect on its representation of the world. We have recognized for a long time that scholarly writing is never value-free. Video not only shares this problematic, but displays it more acutely. It is a medium beyond text, beyond the printed page, and we interact with it in realms beyond the visual. A critical approach to videography requires us to think about these things.

**Keywords:**  
Videography

## Projecting Climate Change Impacts and Risks to Human Health in Ontario: An Overview

**Anderson, Vidya (University of Toronto Scarborough)**

**William Gough (University of Toronto Scarborough)**

**Kristen Herod (University of Toronto Scarborough)**

Climate change is the defining issue of our time and it poses a serious public health challenge for Ontario. Although many of the efforts to address the issue have occurred through environmental initiatives, effective action can only occur if climate change is recognized and dealt with as a multi-disciplinary and cross-sectoral problem. For many, climate change can seem overwhelming and impossible to manage. Public health provides a common lens of understanding that makes climate change relevant and real. Bridging the divide between the human health and environmental impacts of climate change is the key to effective adaptation in this changing world in order to promote healthy environments – both natural and built, improve health outcomes and reduce social costs. Local public health units are uniquely positioned to bridge this divide and reduce public health vulnerability to climate change through risk assessment, preparation and public communication. To effectively address the climate change challenge, climate change information and adaptation considerations need to be integrated into operational processes and cross-sectoral engagement and collaboration on new and existing programs and services must be enhanced. The Ontario Ministry of Health's Environmental Health Climate Change Framework for Action provides a comprehensive approach to support resilient and adaptive communities including the development of a climate modelling study developed in partnership with the Ontario Ministry of Environment and Climate Change and the University of Toronto to project the health impacts of climate change across Ontario's 36 public health units.

## Household Food Insecurity in the Upper West Region of Ghana

**Antabe, Roger (Western University)**

**Luginaah, Isaac (Western University)**

Food insecurity remains a challenge to many households in sub-Saharan Africa although national statistics indicate that some countries have made significant progress in reducing the prevalence. Available evidence shows that food insecurity prevalence in Ghana has reduced from over 60 percent to around 20 percent within the last two decades. However, such national statistics do not adequately capture historical and persistent development disparities that exist between the various regions of the country. This paper assesses the food insecurity situation of households in the Upper West Region – arguably Ghana’s poorest region – through household survey data. The Household Food Insecurity Access Scale (HFIAS), a standardized questionnaire for evaluating household food security status was employed. Complementary log-log regression models were used to estimate the relationship between household food insecurity status and household characteristics of respondents. The findings show that more than 60 percent of surveyed households are severely food insecure. Factors such as large household size, educational status of household head, religion and ethnicity were associated with food insecurity status. The paper demonstrates that national statistics mask the vast regional disparities that exist in food insecurity prevalence in Ghana.

**Keywords:**

Food Insecurity, Ghana, Livelihoods, Nutrition

## The Northern Bruce Peninsula Agricultural Landscape: Multi-temporal Observations with Mobile Mapping Technology

**Anwar, Syed M.S. (University of Waterloo)**

**Goodfellow, Steve (Mohawk College)**

**Caldwell, Jason (Trent University)**

**Gardner, Scott (University of Guelph)**

**Hickson, Dylan (York University)**

**Smith, Devin (University of Guelph)**

**Steckley, Zachary J. (University of Guelph)**

**Sweeney, Stewart J. (Ontario Ministry of Agriculture, Food and Rural Affairs)**

The Bruce Peninsula (BP) is a distinctive part of the extensive Niagara Escarpment landscape feature that stretches over 700 km across southern Ontario. The BP forms Georgian Bay's western boundary and separates it from the main Lake Huron basin. In 2011, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) launched a detailed agricultural landscape mapping project across the northern BP (a 66 km length). This work is part of the on-going Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) geospatial information resource development project. A high-resolution, digital polygon framework of the northern BP's agricultural and rural landscape features ( $\approx 1600 \text{ km}^2$ ) was digitized from 2010 orthoimagery. A series of detailed field-by-field mobile mapping campaigns were conducted during the cropping seasons between 2011 and 2014. Student teams, working for OMAFRA, have made cropping system observations along the public access roadways and trails throughout this area. These were attributed to farmland feature polygons "on-the-fly" with GPS-enabled rugged tablet computers. Beef cattle are the main livestock type raised on this region's extensive grasslands. Substantial pasture and forage acreages support this industry. Wheat, small grains, canola, corn and soybeans were observed on the area's row crop acreages. This cropland has developed over the past century and a half on soil landscapes with deeper glacial and glacio-lacustrine sediment veneers over the underlying sedimentary carbonate Paleozoic bedrock. A series of maps of the northern BP's crop and pasture farmland is presented.

### **Keywords:**

AGRICULTURAL CROPS, MOBILE MAPPING, BRUCE PENINSULA, ONTARIO

## Designing a consistent and repeatable approach for characterizing the patterns of post-fire vegetation residual patches

**Araya, Yikalo (York University)**  
**Rommel, Tarmo (York University)**

Wildfires are frequent boreal forest disturbances in Ontario and emulating them with forest harvesting has emerged as a common forest management goal. Since wildfires typically contain a considerable number of unburned residual patches of various size, shape, and composition, the study presents a consistent and replicable approach for learning their characteristics to inform those concerned with the subsequent emulation of wildfires with forest harvest planning. Using the Random Forest ensemble method, we develop a set of rules that explain residual patch occurrence based on selected predictor variables. We then implement the rules (akin to inverting the learning algorithm) to build maps of likely residual stand locations. Initially, satellite derived data from eleven fire events (from the same ecoregion) are partitioned into training and validation subsets using a hold-out approach. The performance of the model is assessed using independent data from the extensive RED084 fire event as validation data while data records from 11 Northwestern Ontario fire events are used for developing the model. The model is assessed using a fixed-probability threshold and threshold-independent measure at five spatial resolutions (R4, R8, R16, R32, and R64 m) and is found to have a reasonably high predictive performance for most of the fire events. However, the predictive power of the model is lower for the independent fire event. Additionally, the patterns of the residual patches and the importance of various factors that explain their existence are assessed. The responses of the landscape metrics are grouped into three categories: monotonic and predictable, monotonic change with no simple scaling relationship, and non-monotonic change with erratic responses. Our results also indicate that the predictors tend to interactively affect the residual occurrence but that firebreak features, specifically wetlands and water, are among the most important predictors.

**Keywords:**

residual patches, random forest, predictive model, spatial patterns, spatial predictions

## The Production of Sustainability in Neoliberal Urban Development: The Effects of the 2015 Pan Am and Parapan American Games on the West Don Lands (Toronto, Ontario, Canada)

**Ariai, Sarah (York University)**

In the current era, many cities are being transformed into key locales in the larger global economy. Aided by private developer interests and business-friendly urban policies, such cities are characterized by the pressing imperative of inter-city competition, attaining global-city status, and attracting transnational capital. As part of strategies in this pursuit, the formerly industrial lands along Toronto's waterfront are deemed as poor use of the land's intrinsic value. They have been (re)developed into more optimal urban spaces for capital accumulation by private sector developers as they are increasingly the primary actors in implementing policy goals. These developments, such as the West Don Lands (WDL), are inclined toward addressing sustainability concerns as this has become a standard of what constitutes a global-city. The key policy instrument of Toronto, its Official Plan (OP), and the publicly funded and legislated Toronto Waterfront Revitalization Corporation (TWRC) charged with overseeing waterfront development, are reflective of this.

The approaching Pan Am and Parapan American Games in 2015 and location of the Athletes Village in WDL has become a catalyst for its sustainable development as this event will place Toronto on the international stage. By promoting a sustainable city image during the Games, the influx of capital is maximized. However, the increased acceleration of development, as well as neoliberal goals inherent in urban policies and private sector actors, could negatively affect the attainment of sustainable development. Furthermore, conceptions of sustainability in most existing literature and the City's own policies are vaguely conceived. Yet, despite this vagueness, it is increasingly applied to urban development. Policy formulation and its implementation of the vaguely-conceived concept of sustainable development are complicated by neoliberal governance, global-city attainment goals, and the pressures of achieving swift capital circulation and accumulation. Thus, we are left with the question: what is the reality of sustainability?

**Keywords:**

Sustainable urban development; Global City attainment; Capital accumulation; Neoliberal governance

## Seasonal nutrient dynamics during storm events within a calcareous fen in Southern Ontario

**Ariano, Sarah (University of Toronto-Mississauga)**  
**Duval, Tim (University of Toronto-Mississauga)**

Considering the importance of nutrient and solute export within stream ecosystems it is important to classify biogeochemical fluxes during storm events. Further understand of this process is necessary to classify the interaction between streams and wetlands for implications of water quality. Current research shows that water quality is generally improved as it moves through the upland-wetland-stream continuum. However there is a lack of knowledge regarding the impacts on stream water quality when hillslope hydrology is absent. This study examines the impact of 6 summer storms on a second order cold water stream that runs through a calcareous fen. Variations in nutrient dynamics between base flow and storm flow determine the impact of the wetland on stream water quality. We analyzed stream water pH, and electrical conductivity (EC), as well as nutrients including dissolved organic carbon (DOC), soluble reactive phosphorus (SRP), total phosphate (TP), nitrate, and ammonium. Analysis of solutes including chloride, calcium, potassium and magnesium were used as environmental tracers to detect different flow paths. Differences associated with storm flow attributed to seasonality are important to quantify in order to determine the ability of wetlands to improve or reduce water quality.

## Making of the Square: Taksim Square and Gezi Park Protests in Istanbul

**Asci, Pelin (York University)**

The summer 2013 witnessed massive protests that swept the major cities in Turkey. Sparked by the demonstration of a handful of environmentalists against the construction of an “Ottoman-style” shopping mall in place of current Gezi Park, Istanbul, thousands of people marched in the streets against the will of government amid water cannons and intense tear gas. Nearby Taksim Square has become the centre of protests and while the slogan ‘Everywhere is Taksim, everywhere is resistance’ spread to other cities, the international media reported on the protests live from the square to the rest of the world. Inspired by a Lefebvrian approach, this paper examines the spatial practice of Gezi movement, focusing on Taksim square. This paper seeks to explore two main questions: First how Taksim square has come to life and been (re)produced as the centre of conflict and power during the mobilizations? Second how the politics of the square has challenged the existing power relations in Turkey and made new political imaginaries possible? These two questions are intrinsically related and sit at the core of challenging the conventional understandings of space as Euclidian rather than relational. Tracing the historically changing meanings of Taksim square and the importance of producing space for social movements, the paper brings the critical relationship between public space and resistance into attention.

**Keywords:**

Gezi Park protests, Taksim Square, urban movements, public space

## Can she make it? Transportation barriers to accessing maternal and child health care services in rural Ghana

**Atuoye, Kilian (Western University)**

**Rishworth, Andrea (University of Ottawa)**

**Dixon, Jenna (University of Waterloo)**

**Galaa, Sylvester (University of Development Studies, Ghana)**

**Armah, Frederick (Western University)**

**Luginaah, Isaac (Western University)**

The role of transport in delivery of maternal health in rural areas although evident, seems not to have attracted significant attention in developing countries. The Ghana Community based Health Planning and Services (CHPS) strategies targets to bring health services to doorsteps of community in a manner that improves maternal and child health outcomes. This paper reports on the extent to which transport features in the CHPS strategy. Using the political ecology of health theory, the study examined factors accounting for absence of transport for health delivery in rural areas, the effects on health of rural communities and rural health system, coping strategies employed and mechanisms for establishing enduring transport services for rural maternal health. Results from eight (8) focus group discussions in two rural communities involving males (n=40) and females (n=45) show that CHPS is not leveraging health outcomes as anticipated. Motivation to seek health care in health facilities is low as most community members turn to traditional medicines, rate of adherence to referral is estimated at 30%, and comparatively, cost of accessing health care is higher due to absence of transport services in delivering health care in rural areas. The findings point to the need for policy initiatives to provide sustainable transport service for rural health in order to improve maternal health.

### **Keywords:**

Primary health; Community based Health Planning and Services (CHPS); Maternal and child health; Ghana

# Wetland Emissions of Methane Over The Hudson Bay Lowlands: An Application of a Receptor-Oriented Lagrangian Transport Model (STILT)

**Balogun, Olalekan (York University)**

**Bello Richard, (York University)**

**Higuchi Kaz, (York University)**

Northern boreal wetland regions are estimated to hold half of all wetlands and soil carbon in the world (~1700 Pg C), which is twice the amount of carbon currently held within the atmosphere (Tarnocai et al., 2009). More importantly, these regions are sensitive to global warming and there are concerns about the possible increase in greenhouse gas emissions from changing wetlands and thawing permafrost. According to the IPCC (2013), the single most dominant CH<sub>4</sub> source of the global flux is CH<sub>4</sub> emissions from wetlands (177 to 284 Tg (CH<sub>4</sub>) yr<sup>-1</sup>). It has also been verified [with high confidence] that the main drivers of the global inter-annual variability of CH<sub>4</sub> emissions are climate driven changes of emissions from wetlands. Therefore, this research focuses on emissions and fluxes of CH<sub>4</sub> over the Hudson Bay Lowlands region of Canada (the second largest semi-continuous wetland region in the world). Using the Stochastic Time-Inverted Lagrangian Transport (STILT) model, surface fluxes of CH<sub>4</sub> are determined from measured mixing ratios (2007-2013) at the Churchill Northern Studies Centre (CNSC) microwave tower in Manitoba. STILT, a “receptor-oriented” particle dispersion model driven with 3-hourly 32-km gridded meteorological fields from the North American Regional Reanalysis (NARR) dataset and running backward in time is used to map out the source-receptor relationship. For the preliminary stage, we used the STILT model to calculate and map out the influence function (footprint) of the surface sources on the atmospheric concentrations observed at the receptor (CNSC tower). Subsequently, the footprint is multiplied by an a priori emission field to compute the associated contribution to the mixing ratio at the receptor. Other objectives being investigated include; comparison of the modelled mixing ratios against measurements at the observation tower, and examination of the consequence of wind shifts on relative influences from terrestrial and marine sources.

## **Keywords:**

Methane, Hudson Bay Lowlands, STILT, Lagrangian Particle Dispersion Models

## Climate Change Induced Cooling Demand in the Greater Toronto Area

**Asma Fiayaz (York University)**

**Bello, Richard (York University)**

Since 2000 the Toronto medical officer of health has issued 178 summertime heat alerts which are used to trigger the opening of public “cooling centres” to ameliorate the effects of extreme heat on those who find air conditioning unaffordable. It is expected that electrical demand will increase as a result of increased cooling requirements during summers as temperatures climb. This will have the potential consequence of increasing the pool of residents dependent on cooling centres as electricity costs assume an ever increasing proportion of income. In this initial investigation, we examine the increased cooling load on a typical residential home by calculating hourly heat gain to 2095 with temperature data drawn from a five member ensemble PRECIS regional convective model driven by the Hadley, HADCM3 using the A1B SRES scenario for a 25 km zone within Toronto. Cooling loads are scaled to incorporate solar gains as well as infiltration, appliance and body heat contributions. Summertime loads for the periods 1960-1990 and 2065-2095 are compared and show a five-fold increase due to increasing temperatures.

Electricity usage required to meet cooling loads assumes an air-conditioning COP=2.64 which is de-rated as outside temperatures increase. The model runs accommodate programmable thermostats to regulate interior temperatures with time of day. Electrical charges utilize present-day Toronto Hydro Smart-Meter demand rates which increase at 2% annually above the assumed inflation rate of 2%. Electrical costs incorporate delivery and other charges pro-rated to the electricity usage. These indicate that residential cooling costs will increase from the present average of \$131 per year to \$2473 per year for the period 2065-2095. Over the same period of time, the proportional increase these costs represent for a person earning minimum wage will increase from 1.5% to 6.3% of annual income.

### **Keywords:**

Climate change, air conditioning, electricity

Offshore wind energy potential over the Great Lakes from 1980-2012 using the NARR dataset.

**Ashtine, Masao (University of Cambridge)**

**Bello, Richard (York University)**

**Higuchi, Kaz (York University)**

Current and projected changes in the climate have prompted research into potential adaptations to climate change. Renewable energy from wind will be impacted by climatic change and its potential in Ontario is yet to be fully understood. Understanding this potential involves the estimation of both historical and future wind regimes. The North American Regional Reanalysis (NARR) dataset has been widely used in climate data analysis and many studies have attested to its validity and agreement with measured winds. Patterns in wind speed and wind power over the entire province of Ontario and the adjacent Great Lakes and coastal Hudson and James Bays for small wind turbine hub heights (10 and 30 m) were analyzed for the period 1980 to 2012. Air density, atmospheric pressure, temperature, and the instantaneous u and v components of wind speed at three-hourly intervals, with a grid resolution of 32 km were used for estimating wind power. Statistically significant increasing seasonal and annual trends in wind power dominate over water bodies like the Great Lakes and eastern James Bay, with more substantial trends occurring in the fall and winter months. Significant trends of decreasing surface albedo corresponding to declining ice-cover, along with increasing instability in the 10 to 30 m surface layer during the fall and winter months were noted over the Great Lakes, particularly over Lake Superior. The trends suggest a continuing potential for increasing offshore electrical wind generation while lake-ice cover continues to decline.

**Keywords:**

wind energy, climate change, NARR, Ontario

## Canadian Experience: Shaping lives and generations

**Boiragi, Kevin (York University)**

This short documentary studies the ways in which 6 Bangladeshi migrants perceive "Canadian Experience" shaping their lives in Toronto, Canada. This geographical study covers a time span of 5 years starting from 2009, and analyzes how the daily livings of these participants contributed to their settlement processes and struggles (if any) in a transnational societal setting. Finally, it tries to rationalize the necessity of having or not having a "Canadian Experience" that invisibly remains into the integration structure in Canada.

**Keywords:**

Bangladeshi migrants, Canadian Experience, Immigration, Citizenship

## The end of tourism as we knew it? A Gibson-Graham inspired view of the tourism economy

**Brouder, Patrick (Brock University)**

**de la Barre, Suzanne (Vancouver Island University)**

**Aberg, Kajsa G.(Umea University)**

Tourism continues to grow with international arrivals now over the one billion mark each year. Cities, towns, rural and peripheral communities all experience tourism to a greater or lesser extent. The tourism economy is important to many communities, however, tourism development remains a contested field. The various community stakeholders (both tourism and non-tourism) often hold differing ideas on what tourism is, what it can contribute to the community, and how best to develop it. Community relationships and development processes are complex and include both formal and informal interactions which require careful unpacking. Moreover, there are numerous tourism and non-tourism ventures developing alongside each other at the local level, and little is known about how the less-noticed developments manage to survive, and possibly, thrive over time.

In this paper, we draw on feminist economic geography and evolutionary economic geography in order to open up discursive space that supports a rethinking of what tourism development is and can be. The works of J.K. Gibson-Graham (feminist economic geography) and Jan Mosedale (political economy of tourism) offer a lens through which tourism development can be seen outside of the dominant 'boosterist' discourse. This paper takes the conceptual demands of political economy and feminist economic geography and attempts to discuss them within the framework of the evolutionary turn in economic geography. This approach offers a useful lens through which to conceptualise different perspectives on tourism development and encourages us to differently engage in the tourism and community economic development discourse – and the related applied practices. Drawing from diverse rural and peripheral case studies, we demonstrate that there exist more ways to conceive of tourism development than has been typically engaged with thus far. What is more, we suggest that it is possible also that there is much greater desire for community development through tourism, than for tourism development in communities. We ask: how does this shift, which is not new in and of itself, shed new light when considered in the light of Gibson-Graham's work?

### **Keywords:**

development; economic; feminism; geography

# Towards a Critical Service Learning: A Case Study Exploring the Teaching-Learning-Action-Reflection Nexus in Community-Campus Engagement

**Cahuas, Madelaine (University of Toronto)**  
**Levkoe, Charles Z. (Wilfrid Laurier University)**

While there is a growing interest in community-campus engagement, the primary focus has been on economic incentives for university administration and professional training for students as future employees. This paper explores the potential of service learning to bridge university-community divides and open up opportunities for learning among students, community partners and faculty as collective agents of social change. Specifically, we focus on the pedagogy of critical service learning (CSL) that “is unapologetic in its aim to dismantle structures of injustice” (Mitchell 2008: 50) and encourages participants to grapple with personal and societal issues of power and inequity. Although CSL provides a framework for praxis (i.e. teaching-learning-action-reflection) rooted in social justice, it is mired in complex tensions, which few studies have examined from the joint perspectives and relationships of those involved. Drawing on a case study of a graduate service learning course at the University of Toronto in the Department of Geography and Planning, the authors address this gap through research and reflection on their own experiences. We present analysis of data collected between September 2011 and April 2014 from surveys and interviews with individuals involved in the course as well as personal narratives from the perspectives of an instructor and a student. Our findings show that critical service learning can indeed impact individual learning and social justice initiatives. We also highlight the limitations of critical service learning within the graduate geography and planning curriculum as well as the barriers faced by grassroots organizations working for social change.

**Keywords:**

critical-service-learning, pedagogy, praxis

## The Agricultural Landscape of Simcoe County's Essa Township: A Century After James Stoddard Duff, M.P.P.

**Caldwell, Jason (Trent University)**

**Nussli, Emma R., (University of Waterloo)**

**Anwar, Syed M.S. (University of Waterloo)**

**Gardner, Scott (University of Guelph)**

**Gauthier, Tasha-Leigh J (University of Waterloo)**

**Hickson, Dylan (York University)**

**Merchant, Michael A (University of Guelph)**

**Tran, Darlene N,M,H (University of Waterloo)**

**Van Huizen, Brandon S. (Brock University)**

**Vanthof, Vicky R. (University of Waterloo)**

**Sweeney, Stewart J. (Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph)**

One hundred years ago James Stoddard Duff (June 20, 1856 - November 17, 1916) was Ontario's Minister of Agriculture (1908-1916) at the outbreak of the First World War. He was born on a farm in southern Essa Township (ET) of Simcoe County (SC), Ontario. The hamlet of Ivy, in ET's central northeastern area, hosted the 2014 International Ploughing Match (IPM) in mid September. This agricultural landscape mapping project, launched by a student team working for the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), celebrates ET as the 101st IPM host and commemorates Mr. Duff for his contributions to Ontario agriculture a century ago. A detailed field-by-field mobile mapping campaign was conducted along public access roadways and trails throughout ET (280 km<sup>2</sup>) during the 2014 cropping season. A high-resolution, digital polygon framework of ET's agricultural and rural landscape features was built from 2002 orthoimagery as an initial contribution to developing the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) geospatial information resource. Newer orthoimagery coverages have permitted 2008- and 2013-versions of the Ontario AgRI polygon framework for ET to be crafted. Cropping system mobile mapping observations were attributed to farmland polygons "on-the-fly" with GPS-enabled rugged tablet computers. Farmland out of direct line-of-sight from public access roadways was observed with the aid of a video camera mounted on an unmanned aerial vehicle (UAV) copter drone. A detailed map of Essa's 2014 crop and pasture farmland is presented.

### **Keywords:**

AGRICULTURAL CROPS, MOBILE MAPPING, UAV IMAGING, ESSA TOWNSHIP, ONTARIO

## A Vision of Urban Security in the Smart City

**Carter, Michael (Queen's University)**

The 'smart city' model of urban governance has gained traction in recent years. In this model advancements in information communication technology (ICT) are applied to the challenges of contemporary city management. In an effort to profit from this trend, global technology firms are selling technology-based solutions they claim can help cities achieve their visions of economic, environmental and social sustainability. These solutions require a dramatic expansion and intensification of the monitoring of city activity, reflecting a shift in the urban surveillance landscape. In the smart security industry, enhanced surveillance powers are justified through their putative potential to minimize disruption to economic, political and cultural activity in city spaces. In this presentation I critically examine this unproblematic presentation of increased urban surveillance.

Surveillance is a familiar and common activity of city police. However, firms competing for market share in the rapidly expanding smart city industry are framing increased surveillance capacities as crucial for urban security. In this presentation I provide an illustration of the new and extraordinary urban surveillance and security vision emerging from smart security marketing materials. I will discuss several themes that underpin this vision, and some conspicuous absences. I argue that in addition to being intentional, these silences have serious implications for public life. These include the potential for creating spaces of social exclusion, the marginalization of democratic features of city space and the erosion of privacy.

**Keywords:**

smart city; surveillance; security; information communication technology

## Documenting Holocene periglacial activity in the southeastern British Columbia Coast Mountains

**Charbonneau, Ansley A. (University of Victoria)**  
**Smith, Dan (University of Victoria)**

The discovery of rock glaciers located on the eastern flanks of the British Columbia Coast Mountains allows for description of a previously undocumented periglacial response to climatic variability over the Holocene. Rock glaciers are frozen masses of ice and rock debris that move downslope by permafrost creep, often bearing the visible expression of ice deformation. An aerial inventory indicates there are at least 165 intact rock glaciers located between 50° – 52° N Lat. These large permafrost bodies occur at high altitude, between 1829 to 2438 m asl, where mean annual air temperatures range from -3.1 to 0.6 °C. Mean annual precipitation is low to moderate at these sites, ranging from 472 to 1616 mm w.e., reflecting the continental nature of air masses characterizing the adjacent Chilcotin Plateau. The majority of rock glaciers are glacier-derived (n=134); these landforms originate from the moraines and debris-covered snouts of retreating ice glaciers. This suggests a landscape transition from glacial to periglacial processes since in the early 1700s, when glaciers began to retreat from their Little Ice Age maximums. In order to understand this transition, an inventory is presented and discussed with reference to other major landscape features. Future directions for alpine research in light of this information are also provided.

**Keywords:**

alpine; permafrost; glaciers; Holocene

## Coastal Impact Visualization Environment (CLive) – Geovisual engagement and communication of climate change using 3-D geovisualization techniques in Prince Edward Island

**Chen, Alex (University of Toronto-Scarborough)**

**Doiron, Andrew (University of Prince Edward Island)**

**Fenech, Andrew (University of Prince Edward Island)**

**Hedly, Nick (Simon Fraser University)**

The Coastal Impact Visualization Environment (CLIVE) is an analytical geovisualization tool created by researchers at the University of Prince Edward Island's (UPEI) Climate Lab, University of Toronto Climate Lab and Simon Fraser University's (SFU) Spatial Interface Research Lab. The collaborative team is known as C2C. Clive combines 3-D geovisualization, GIS and game engine technologies for the purpose of communicating coastal impact and sea level rise. Using a mixture of climatological, spatial and coastal erosion data, Clive can simulate future environmental effects. This presentation will discuss (1) the framework and workflow for the design and implementation of the tool (2) the current application of the framework in Prince Edward Island (3) the impact of CLive as a policy tool in local communities (4) possible future applications of Clive with different visualization technologies

### **Keywords:**

climate change, adaptation, geographic visualization, sea-level rise, coastal erosion

Development of a Bayesian prognostic tool for tornado occurrences in North America

**Cheng, V.Y.S.\* (Ecological Modelling Laboratory & Climate Lab, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

**Arhonditsis, G.B. (Ecological Modelling Laboratory, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

**Sills, D.M.L. (Cloud Physics and Severe Weather Research Section, Atmospheric Science and Technology Directorate, Science and Technology Branch, Environment Canada)**

**Gough, W.A. (Climate Lab, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

**Auld, H. (Risk Sciences International)**

A Bayesian statistical modelling approach with large-scale climatological/atmospheric variables as predictors is developed for elucidating the spatiotemporal patterns of tornado activity in North America. The predicted tornado occurrences show a significant increase in the Canadian Prairies and the Northern Great Plains during the summer, indicating a clear transition of tornado activity from U.S. to Canada. The influence of the monthly and seasonally averaged atmospheric variables on tornado occurrence is characterized by a distinct seasonal pattern; the convective available potential energy is the predominant factor in the summer; vertical wind shear appears to have a strong signature primarily in the winter and secondly in the summer; and storm relative helicity is most influential in the spring. Analysis of the model residuals indicates vertical wind shear is better in capturing tornado occurrence in the wintertime. Both model performance and influence of atmospheric parameters suggest that geographic and seasonal variability should be considered when developing tornado prognostic tools.

**Keywords:**

North America, tornado occurrence, Bayesian inference, climatology

## Who Has the Power? Who Makes the Decisions? Regime Theory, Democratic Legitimacy, and Place Branding

**Cleave, Evan (Western University)**  
**Goodwin, Arku (Western University)**

Over the past two decades, the issue of place branding has become an increasingly important item on the policy agenda of municipalities in Ontario in their economic development efforts. The goal of these policies is ultimately to attract talent, business, and investment into the locale, and as such plays an important role in the economic development trajectory of the municipality. However, as local governments in Ontario increasingly become reliant on private-public partnerships, it remains unclear who the key stakeholders and influencers are and whether there is any democratic legitimacy within the process. It also remains unclear whether the decision-making is representative of the public interest, or centred around the agenda of urban elites. To investigate this issue, in-depth interviews with two groups – local economic development practitioners (n = 25) and place brand consultants (n = 10) – were conducted to examine which stakeholders were involved, and held power in the place branding process. The results of this study demonstrate that the place branding process typically lacks strong democratic legitimacy, and is instead dominated by a regime of semi-private and private interests. In particular, the external consultant appears to have considerable influence in the place branding process. Based on this analysis, a critique of contemporary place branding initiatives is that an uneven distribution of access to the process and power held by key stakeholders limits the effectiveness of producing a coherent brand that is reflective of the perspectives of all members within the community.

### **Keywords:**

Place Branding, Local Economic Development, Regime Theory

## Monitoring Change in the Coastal Environment of Southwest Tobago, Trinidad and Tobago

**Daly, Darren (University of Guelph)**

**Mersey Janet, Davidson-Arnott Robin (University of Guelph)**

Southwest Tobago's coastal environment has undergone significant changes over time due to natural and anthropogenic forces. With the use of remote sensing media such as Landsat imagery and aerial photography, the quantification of changes to constituent areas of its environment including Pigeon Point-Swallows Beach, Buccoo Reef and Bon Accord Mangrove Wetland was performed within the periods 1966-2014 for the shoreline area and 1991-2014 for the reef and mangrove areas. The historical shoreline changes along Pigeon Point-Swallows Beach were assessed using aerial photography and Landsat imagery. Rates of shoreline changes were generated utilizing linear regression and end point rate statistical methods within the United States Geological Survey Digital Shoreline Analysis Shoreline System (DSAS). The evaluation of changes to the Buccoo Reef and Bon Accord mangrove wetland involved an unsupervised classification of Landsat images using the ISODATA algorithm and post-classification analysis. Results indicate that the western section of Pigeon Point-Swallows Beach (Atlantic Ocean side) experienced a mean annual shoreline change of -0.45 m/yr. The eastern section of the beach (Caribbean Sea side) experienced a mean annual shoreline change rate of 0.75 m/yr Caribbean Sea while its northern section which is characterized by the presence of a spit showed a mean annual change rate of -0.13 m/yr. Buccoo Reef showed a relatively large decrease in coral reef cover with an area of 0.94 km<sup>2</sup> (3.98%) changing either to seagrass/algae or to rubble. The mangrove cover within the Bon Accord Mangrove Wetland remained relatively stable over the period of time.

**Keywords:**

remote sensing, shoreline change, coral reef, mangrove

## The Mixed Use Challenge: Turning Tides of Retail Development

**Daniel, Christopher (Ryerson University)**

**Hernandez, Tony (Ryerson University)**

Retail development is seen by many in the industry as occurring in “waves” of development where new retail growth during each wave shares common structural and operational characteristics. Russell Schiller (2001) identified three main waves of what he called ‘retail decentralization’ from a structural perspective taking place over a period of three decades from the late 1960s to the 1990s. The root causes identified by Schiller for these waves of retail decentralization were the rapid growth of automobile use and suburban residential settlement patterns. With this in mind, it would appear that we are currently on the cusp of the next set of retail development waves, especially in Toronto. In all likelihood, these waves will become known as waves of “Retail Centralization” as opposed to the waves of decentralization identified by Schiller. The “Places to Grow” legislation and corresponding GGHA Growth Plan introduced by the Ontario provincial government in 2006 promote ideas of smart growth that have gained traction in the realm of urban planning for the last decade across North America. The GGHA growth plan encourages dramatic increases in population density within 25 growth nodes spread around the GGHA. This population densification is meant to take place within mixed-use developments that will encourage walkability and increased use of public transit rather than automobile based travel. This paper will explore how these changes in settlement and transportation patterns are likely to affect consumer behavior and the resulting changes in retail development and locational strategies undertaken by retail firms.

**Keywords:**

Urban Planning, Retail Geography

## Sustainable Flows: Water provision and treatment in settlements of Southeast Asia

**Danière, Amrita (University of Toronto)**

**Drummond, Lisa B Welch (York University)**

**NaRanong, Anchana (National Institute for Development Administration Thailand)**

**Tran, Van Anh (Vietnam Academy of Social Sciences)**

While it is clear that a transition towards sustainable urban water practices is a global concern as climate change progresses, for cities in Southeast Asia such a transition is urgently and immediately needed as a response to present conditions. Cities in Asia are growing rapidly and water is limited in quantity as well as being constantly degraded in quality due to both pollution and lack of wastewater treatment. At the same time, many cities are particularly vulnerable to the impacts of climate change. The literature on urban water practices in the context of climate change coheres around the recommendation that appropriate policy approaches require frameworks which can accommodate uncertainty and complexity as well as organizational cultures that support experimentation and learning. In other words, the answer to contemporary water problems is not “engineering” but “flexible, inclusive, and collaborative practices” which encourage experimentation and creativity in adapting systems to changing patterns of water supply and access (Farrell and Brown: 721). This overall approach is referred to “sustainable urban water management” (SUWM).

In this paper, we examine two Southeast Asian cities, Bangkok and Hanoi, both facing the relentless combination of water problems and climate change impacts. This pair of cities offers a potentially insightful opportunity to compare and contrast due to their divergent 20th century histories and political presents, but their similar water problems. Bangkok is the capital of a laissez-faire state that has implemented both decentralization policies and national ‘bottom-up’ poverty alleviation programs. Hanoi is the capital of a Communist state experimenting with “market socialism” where citizen participation is nominally key to functioning socialism but in practice rarely substantive or determinative of policy. Our case study examines these cities’ particular combination of advantages or obstacles in terms of their potential for implementing SUWM mechanisms.

### **Keywords:**

Water, Bangkok, Hanoi, sustainability

## Privatizing Development: The Shifting Geographies of Elite Hockey Player Production in British Columbia

**Decosse, Stefan (York University)**

Private capital has increasingly gained access to the finance and provision of public services in British Columbia and other jurisdictions since the 1980s. An example of this process is the formation of public- private partnerships (P3s) between governments and private finance capital to construct and operate ice rink facilities. P3 ice rinks constitute 46% of all ice rink construction in BC since 1990 and are primarily located in urban locations. Concurrently, Hockey Canada (HC) sports schools and High Performance Training Companies (HPTCs), the latter of which operates outside the auspices of HC, have capitalized on the influx of private ice rinks and have begun providing services at exorbitant cost to prospective young hockey players. Private actors are not concerned with providing equitable access to their services. Rather, they cater to the demands that emanate from the market. The rise of privately owned ice rinks, HC sport schools, and HPTCs has transformed the production and geographies of elite hockey players in British Columbia. The project investigates the links between the privatization of public facilities, the commodification of the production of elite hockey players, and the uneven geographies of urban and rural regions of British Columbia.

Field research was conducted this past summer in Trail and North Vancouver, British Columbia. I intend on presenting my preliminary findings and conclusions from my summer in the field.

**Keywords:**

Neoliberalism, uneven development, sport

## When status matters: Beyond the state-migrant relationship

**Dennler, Kathryn (York University)**

Immigration status categorizes the relationship between a migrant, territory, and the state. Although status is determined by state representatives, it acquires force in how it reverberates through the practices and possibilities of everyday life. Drawing on my professional experience serving refused asylum seekers in the UK, as well as gray literature on destitution among refused asylum seekers, I examine a series of 'micro-moments' through the lens of Butlerian performativity to argue that refused asylum seekers experience status through everyday interactions with members of the British public more frequently than through contact with state representatives. Social interactions with roommates, friends, neighbours, employers, service providers, or a cashier at the local shop are key sites to understanding why and how immigration status matters. Further, attention to the how immigration status is produced in everyday life opens up possibilities to challenge the stability of its reproduction. Even when scholars, activists, allies, and friends cannot change state policy or policy categories, we can change the enactments of those policies and categories. In particular, this paper considers how service providers rupture those regulatory norms that enable the destitution of refused asylum seekers and, instead, support refused asylum seekers' efforts to forge a livable life. If practices that undermine and challenge regulatory norms about immigration status are repeated, they can cleave open regulatory norms to resignification. In this paper, Butlerian thinking means seizing "the thought of the possible" in order to contest the salience of the state-migrant relationship.

**Keywords:**

immigration status, refused asylum seeker, performativity, the state

# Mobile Technology and Space: A Study of the Learning Commons at Brock University

**Dingle, Connor (Brock University)**

University libraries across Western nations have in recent years constructed new spaces or converted existing spaces into what is generally called a 'learning commons' model. These newly made spaces support a wider range of interactions than traditional library spaces, encouraging what is known as 'social learning' by facilitating group collaboration and the use of personal technological devices. The learning commons at Brock University serves as the research site for an ethnographic inquiry into how students collectively shape, mould, and otherwise construct this space. Geographical and various media scholarship has identified personal communications devices (in particular cell phones and more recently 'Smart phones') as an influential force in shaping the social landscape in public spaces. These studies are more so situated in cities and urban spaces; very few focus on institutional settings such as libraries. To fill this gap in the literature, this thesis project draws on the intersections of geographical theories of spatiality and technology, supported by findings from recent media scholarship, and contextualized by discussions surrounding learning commons in library science. Ethnographic interviews with students and library staff as well as observations of the learning commons are used in order to discuss how spaces are constructed by students' daily practices, students' relationships to their personal technological devices, and as codes of behaviour are learned and reproduced. The presentation covers the framework, the initial and the anticipated findings of this master's thesis project.

**Keywords:**

Ethnography, Learning Commons, Mobile Technology, Digital Space

The urban gay male cruiser: mobility, neoliberal governance and 'deviant' sexual acts.

**Downey, Bryan (York University)**

This paper will seek to add to the growing body of literature involving sex as a spatial practice and how men gather to informally participate in 'deviant' sexual acts with other men in commercial sex environments (CSEs), particularly within urban centers. I strive to make evident that such undesirable spaces such as CSEs are consistently being challenged; therefore challenging the participation of men in these spaces and further limiting the spatial and social boundaries in which they exist. I argue that the limits placed on these men is at least partially due to neoliberal policies enacted by governmental agencies to further control and exercise power over these bodies and the way they choose to express themselves sexually. Society's strong and active heteronormative watchful eye also contributes to this demobilization of men who have sex with men, and also informs many of the policies of neoliberal governance.

**Keywords:**

Queer Geography, Governmentality, Mobility, Commercial Sex Environments

Ecological conflict: a water limited species is distributed away from water

**Drezner, Taly (York University)**

I hypothesized that the saguaro cactus (*Carnegiea gigantea*) would be found disproportionately more often in areas of concentrated runoff (runnels), particularly at the study site which is near the water limiting edge of the species' range. Saguaros establish under nurse plants which ameliorate the microsite for the saguaro. Only saguaros under a typical nurse, the palo verde, were sampled to control for microsite variability. Chi-square results were significant and surprising. While 80% of palo verdes were in runnels, only half of the saguaros were found there; the other half of the saguaros were found under the remaining 20% of the palo verdes in the open desert. When palo verdes nursing multiple saguaros were considered, only 7% of palo verde trees supported multiple saguaros in runnels, while a full third of trees supported two or more saguaros in areas without increased moisture, and where intraspecific competition would further reduce available water. This pattern may be related to disturbance in these more fluvially active areas or due to the transport and removal of seeds from under palo verdes, resulting in potential deposition in unfavorable or exposed locations. Seed-seedling conflicts are those where different factors favor a species' success in different stages of its life cycle and such conflicts can dramatically impact the final pattern of species establishment. The distribution of individuals at the seed stage may conflict with the needs of the plants once germinated.

**Keywords:**

biogeography, ecology, desert, rivers

## Video-Based Systematic Social Observation of Neighbourhood Attributes: Opportunities, Ethics & Technology

**Dunn, James (McMaster University)**

There is a robust body of work that uses methods of Systematic Social Observation (SSO) to quantify visual aspects of neighbourhoods in social research. With roots in broken windows theory and crime, early efforts were to quantify visual cues of social and physical disorder to examine their relationship with crime. Other fields, including public health and child development, have also used this method to measure social and physical disorder. With new technology acquired at McMaster University's Collaboratory for Research on Urban Neighbourhoods, Community Health & Housing (CRUNCH), it is now possible to conduct such research efficiently and also preserve the raw data for historical research. In this panel presentation, I will describe the technology and some early opportunities, touching also on some of the ethical and privacy issues it has raised.

## Working towards an 'everywhere production of tourism': Agritourism in Southern Ontario and an everyday take on tourism economy

**Dupej, Susan (York University)**

'The everyday' as a framework for studying tourism production reveals a variety of unconventional economic forms and practices, and offers an alternative understanding of what constitutes 'the economy' in tourism research. In this paper, I use agritourism to provide an account of the ways in which tourism production assumes a presence everywhere and in various everyday forms, spaces and experiences of those individuals who work to produce agritourism attractions in Southern Ontario. In negotiating the meeting of home, work and tourism destination, farmers of agritourism sites experience a side of tourism production that includes the life contexts of family bonds and legacy, emotional connections, invasion of privacy, improvisation, and self-making. These are all elements of what I call an everywhere production of tourism, which makes way for non-capitalist considerations of the economy necessary for adapting to an ever invasive and inescapable tourism capitalism in the home. The everydayness of tourism production creates new social relations, new ways of thinking about everyday space, and new aesthetic sensibilities for those that produce it.

## Agricultural Landscapes of the City of Ottawa: Mobile Mapping Ground-truth Results 2014

**Dylan, Hickson (York University)**

**Nussli, Emma R (University of Waterloo)**

**Steckley, Zachary J. (University of Waterloo)**

**Sweeney, Stewart J (Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph)**

The City of Ottawa (CofO) has an impressive suite of detailed geospatial information products for the lands (1600 km<sup>2</sup>) within its boundaries. Most recently, a Light Detection and Ranging (LiDAR) mission was flown to complete high-resolution digital elevation data cloud coverage of the entire City footprint. The current digital soil map products for the CofO were overlain onto this LiDAR-based DEM. Improvements are needed to better reflect the intended locations of soil series across the agricultural landscape areas. The Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA), in collaboration with the CofO, launched a pilot project to renew the digital soil map products employing innovative predictive digital soil mapping (PDSM) techniques. Two pilot project areas (9 km X 9km), with prominent agriculture, were selected. This PDSM approach requires detailed knowledge of farming and cropping system practices at the field-by-field level. A seamless digital polygon framework of all agricultural and rural landscape features was digitized for these areas from high-resolution 2011 orthoimagery. This is framework underpins the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) geospatial information resource. A field-by-field mobile mapping campaign, to record agricultural landscape observations, was conducted in Summer 2014 along public access roadways and trails throughout these pilot areas. These observations were attributed to farmland feature polygons and to points “on-the-fly” with GPS-enabled rugged tablet computers. Maps of the crops and pasture farmland in these two pilot areas for the 2014 cropping season are presented.

Keywords:

AGRICULTURAL CROPS, MOBILE MAPPING, CITY OF OTTAWA, ONTARIO

## Geographies of Legislative Difference: Quebec's Values Charter and the Unveiling of Muslim Women

**Farries, Elizabeth (University of Toronto)**  
**Sturm, Tristan (York University)**

The Parti Quebecois proposed a Quebec Charter of Values ("Charter"), which aimed to ban conspicuous religious symbols amongst public sector workers. Out of this initiative, a conversation/debate emerged about the Charter's impact on Muslim women living in Quebec who wear Islamic veils. Despite Muslims constituting less than two-percent of the Quebec population, the visibility of Islamic veils is marked and contested through debates of secularism, multiculturalism, and nationalism in many disciplines including geography. The proposed Charter appeared as the latest manifestation of this debate in Quebec. By combining the theoretical approaches of critical race feminism in geography, legal geographies, and geographies of secularism to a critical discourse analysis, we will document how Canadian Media created social agendas, constructed ideologies, and framed social issues, thereby providing the lens through which Canadians viewed the Charter's implications. We hypothesize that while Media narratives within Quebec supported the Charter as pro-secular and pro-women's rights, the primary narrative profiled Muslim veil wearing women in Quebec as primitive and subordinated in order to justify limiting their cultural rights. We will explore how the veil became the dominant cultural and media focus in Quebec, and, as is the case in France and Turkey, a threat to established secular liberalism and ethnic nationalism where religious categories come to operate as racial categories. We will also explore how the Charter was an attempt to subjugate difference in Quebec in order to promote an ethnic nationalism guised as a liberal and secular civic nationalism in counter-distinction to Canadian multicultural ideals. This research will contribute to the critical and competing discourses surrounding the recognition of cultural sovereignty, secularism, and women's rights in Quebec and Canada.

**Keywords:**

law; feminism; religion; critical race theory

## Is Large Scale Mining Really the Cause of Poverty? [or “Why Don’t They Have Savings?” How the Dialectics of Space Influenced Socioeconomic Outcomes.

**Felipe, Alex ZN (York University)**

In late 2012 the small-scale miners (SSM) of Mt. Balabag in Zamboanga Peninsula (Mindanao, Philippines) were forcibly displaced to make way for a large-scale Canadian mine. In operation since 1995, their workers were earning relatively high incomes. For the SSM elite they saw their industry as an economic and cultural boon for the impoverished local population. Yet, in reality, the educational achievements of the youth, investments in land and/or homes, and monetary savings remained low for the majority of the SSM workers.

While it is a fact that the entry of the foreign mine was detrimental to their socioeconomic futures, a question remains: Why didn’t their previously high incomes have a positive influence on their overall socioeconomic status? Or more simply: Why aren’t they ‘better off’ after small-scale mining than before? In fact, there is indication that the opposite may be true; that their experience with mining actually resulted in a downturn especially in a cultural sense as reports of community issues with social vice and domestic violence have increased.

My presentation, based on early examination of my fieldwork findings from the summer of 2014, will examine these issues through the lens of Henri Lefebvre’s dialectics of space (seen as a component of the relations of production—simultaneously social and spatial) and how they impact everyday life. The physical space of Balabag and the surrounding region, contrasted with the imagined space of the SSM elite, and as represented in the lives of the workers created a social reality quite different from expectations.

The ramifications of this study go further than simply one mine site, but inform the struggle towards development for the Global South and beyond. The roots of poverty will be seen in dialectical relation to qualitative changes in space itself.

**Keywords:**

"Production of Space"; "Extractive Industries"; Development; "Global South"

## Visualizing the “Dirty Dozen” in Lake Ontario Sediments

**Forsythe, K. Wayne (Ryerson University)**

**Bouchard, Hyacinth (Ryerson University)**

**Swales, Stephen J. (Ryerson University)**

**Aversa, Joseph M. (Ryerson University)**

**Jakubek, Daniel J. (Ryerson University)**

The “Dirty Dozen” are a group of persistent organic pollutants (POPs) that negatively impact the environment and human health. Among the most prominent are polychlorinated biphenyls (PCBs), polychlorinated dibenzo-p-dioxins (dioxins) and hexachlorobenzene. All of these can be found in varying amounts in the sediments of Lake Ontario. Historical (1968) and more recent (1998) data from lake-wide sediment surveys were analyzed through the use of the ordinary kriging geospatial analysis technique (within ArcGIS). The results were then draped over bathymetry data to visualize the distribution of these contaminants. Concentrations have generally decreased over time, however problem areas still exist. Higher levels were commonly found in deep lake basins where pollutants tend to migrate over time. Proximity to traditional industrial areas also appears to affect contaminant distribution relationships. The use of ordinary kriging for the analyses and the inclusion of bathymetry data for mapping significantly enhanced the understanding of observed pollution patterns.

**Key words:**

Ordinary Kriging; Visualization, Bathymetry; Sediment Contamination

## A Journey through the Garden of Ontario's Lake Erie Coast: Mapping Norfolk County's Agricultural Landscape

**Gardner, Scott (University of Guelph)**

**Nussli, Emma R. (University of Waterloo)**

**Steckley, Zachary J., (University of Waterloo)**

**Sweeney, Stewart J.,(Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph)**

Norfolk County (NC) occupies over 1600 km<sup>2</sup> of southern Ontario along the northern Lake Erie coast. It has tremendous diversity in both its natural ecosystem and its agricultural production systems. Since the 1790's, farming activities have spread inland from the southern coastal "Long Point Settlement". NC's farms now boast both the Ontario and Canadian production lead in a broad array of specialty crops. These include sweet corn, ginseng, pumpkins, squash and zucchini, asparagus, cabbage, peppers, cucumbers, strawberries, sour cherries and sweet potatoes. Annual NC crop production ranks first provincially in blueberries, second in apples, raspberries and potatoes and third in tomatoes. It also leads the province in rye production. Tobacco has remained a prominent crop for two centuries. Over the past decade, the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA) has incrementally developed the Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) geospatial information resource. Its core element is a seamless digital polygon framework of agricultural and rural landscape features that is digitized from high-resolution orthoimagery. Approximately one-third of the county has been covered with the Ontario AgRI polygon framework at this time. Field-by-field mobile mapping campaigns, to record cropping system observations, have been conducted along public access roadways and trails throughout parts of NC over the past several cropping seasons. They were attributed to farmland feature polygons and to points "on-the-fly" with GPS-enabled rugged tablet computers. A series of maps of NC crop and pasture farmland is presented.

## Projecting Climate Change Impacts and Risks to Human Health in Ontario: Climate change framework

**Gough, William (University of Toronto Scarborough)**  
**Vidya Anderson (University of Toronto Scarborough)**  
**Kristen Herod (University of Toronto Scarborough)**

Rainstorms and floods have always been a fact of life in Ontario, so have droughts and heat waves, winter storms, tornadoes and windstorms. These events used to happen relatively infrequently. Now, some are observed to have become more common and are a clear sign of a powerful shift in our weather patterns which is very likely to continue. This shift threatens Ontarian's health and safety, environment and economy. In Ontario, average temperatures could rise by as much as 3 to 8 degrees Celsius over the next century. Warmer temperatures will likely result in milder winters, longer growing seasons and a higher frequency of severe weather events such as record-breaking storms, floods, droughts and heat waves. The expected changes in our climate will have a significant impact on all sectors of our province. To assess the impact of a changing climate on human health in Ontario, a Climate Change Impact Assessment (CCIA) formalism is employed as part of a climate modelling study to project the health impacts of climate change across Ontario's 36 public health units. This consists of 1) identifying climate variables related to human health, and 2) determining through the use of climate model output the changes to these climate variables and by extension to human health issues of interest. This knowledge will provide the starting point to develop effective adaptation strategies.

## Sea ice change in the Hudson Bay region: updated to 2011

**Gough, W.A.\* (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Kowal, S. (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Butler, K.A. (Climate Lab, Department of Computer and Mathematical Sciences, University of Toronto Scarborough)**

Gagnon and Gough (2005) published a comprehensive examination of sea ice in Hudson Bay spanning the years 1971 to 2003. Time series were created for a 36 point grid. Metrics examined were break up and freeze up dates using 5/10ths as the threshold for determining the transition from an ice state to a non-ice state for break up and vice versa for freeze up. The current work repeats the earlier work and expands it by adding eight additional years and by adding an ice free period metric. Gagnon and Gough (2005) reported a strong statistically significant trend for earlier break up dates and a less strong trend for later freeze up. With the addition of eight years of data (2004-2011), both break up and freeze up are strongly significant as well as ice free period. A preliminary spatial analysis is presented.

**Keywords:**

breakup, freeze-up, Hudson Bay, sea ice

## Spatial analysis of Pedestrian Injury in Toronto, Canada: A Study of age specific environmental and social risk factors pedestrians face in an urban environment

**Grise, Emily (University of Toronto)**

**Buliung, Ronald (University of Toronto)**

The City of Toronto, Canada experienced a ten-year high in pedestrian fatalities last year and currently has the highest pedestrian collision rate per 100,000 population of all Canadian cities. This research aims to explore spatial patterns of pedestrian injury in Toronto, with a particular focus on age-based differences in the geography, and social and environmental determinants of injury and injury risk. A method was developed to analyze pedestrian injury intensity throughout the city while controlling for the population at risk, to visually explore and identify geographical areas that are more dangerous for each age group. Weekday pedestrian injury events were the focus of this study, as a result of the irregularity between weekday and weekend pedestrian activity. The intent of this analysis was to capture the majority of pedestrian motor vehicle accidents that occurred during daily travel or activity patterns. As a result of differences in activity patterns for each age group and the social and environmental risks that are incurred by where one walks, pedestrian injury events were visualized separately by age. Results of the spatial analysis demonstrate variation in injury intensity by age group. An examination of injury events by level of severity reveals that the intensity of fatal and major injury events shifts away from the downtown core towards the inner suburbs of the city, particularly for children and seniors.

## Forced Displacement, Racialization and Resistance in Pereira, Colombia

**Gutiérrez Castaño, Julian (York University)**

This presentation explores the racialization of forced displacement in Colombia, as well as practices of resistance that challenge racism in public spaces. There is a strong relation between displacement and racism in Colombia. The disproportionate numbers of forced displacement among ethnic groups have been acknowledged by Consejería para los Derechos Humanos y el Desplazamiento (CODHES, 2013), United Nations High Commissioner for Refugees (UNHCR, 2011; 2012), and even government institutions like Defensoría del Pueblo (2011) and Acción Social (2010). This paper draws on a wider discussion related to internalized racism in Colombia and Latin America. My argument investigates how whiteness is a privilege in Latin America (Wade, 1993; Koopman, forthcoming) and explores how Mestizas are oppressed by racism (Anzaldúa, 1987; Smith, 1996), although they prefer to see themselves closer to a white/European heritage in order to access the privileges and power of 'whiteness', ignoring their Indigenous and African ancestry (Paz, 1972; Anzaldúa, 1987). The socially and spatially constructed division between racialized and non racialized people provides the justification for the othering of racialized subjects, which has profound implications in the material understanding of forced displacement and stigmatization of internally displaced persons by the conflict in Colombia (Escobar, 2003; Oslender, 2007). Following this idea, the process of displacement itself can be seen as a cause of racialization, particularly in urban settings (Escobar, 2003). Internally displaced people do not accept this racialization passively; they resist and challenge racism through collective organizing and ordinary practices, such as cooking, hair styling, art/handcrafting. These individual and collective practices question negative/racist stereotypes and transform public spaces in the city.

**Keywords:**

Whiteness, Mestizaje, Racialization, Displacement

## Offsetting dispossession? Terrestrial conservation offsets and First Nation treaty rights in Alberta, Canada

**Hackett, Ryan (York University)**

A diverse range of actors in Alberta, Canada have recognised terrestrial conservation offsets as a way to compensate for the ecological consequences of the province's oil sands boom. Offset programs are representative of a global trend toward the rescaling of environmental governance, and greater use of market-oriented tools for conservation practice. This global shift in conservation techniques has generated a somewhat divisive academic literature that views market oriented approaches as either utopian win-win scenarios, or as part of a larger class-based project that threatens democracy and serves to channel benefits to powerful societal actors. Much less attention has been paid to how seemingly neoliberal practices might be appropriated for a diverse range of political ends, resulting in more heterogeneous political and material outcomes. Drawing on recent scholarship that frames neoliberalism as a set of governance techniques, rather than a unified political project, the paper explores the ways in which market-based conservation tools, such as conservation offsets, might be put to progressive political ends in a manner unanticipated by the often bifurcated literature on the topic. Specifically, the paper explores recent attempts by some First Nations in Alberta to implement conservation offset programs as a means of securing greater control of traditional territory and social and cultural sustainability. The case study complicates some of the dominant narratives of market-based conservation, and works to expand our understanding of neoliberal conservation practice by focusing on how the context of particular places may complicate both the underlying logics and material outcomes of market-oriented conservation.

**Keywords:**

neoliberal conservation; aboriginal communities; biodiversity offsets; conservation

## Retail Co-Location: a spatial framework for analysis

**Hernandez, Tony (Ryerson University)**  
**Daniel, Christopher (Ryerson University)**

The co-location of retail establishments is an essential element of the business model that can be used to understand the spatial configuration of the consumer service landscape. The externality effects of such co-location (i.e., agglomeration) have, for many years, formed the basis of clustered development and commercial built-form: ranging from the formation of traditional 'Main Street' retail strips to the development of suburban 'mega-malls'. Based on an underlying retail structural data set provided by the Centre for the Study of Commercial Activity (CSCA), Ryerson University - we examine retail co-location relationships in terms of both spatial scale and location type (mall, power centre and retail strip). The methodology adopted within our study builds on the work of Larsson and Oner (2014), in which they analysed pairwise correlations at varying spatial scales to compare and assess the co-location relationship of selected retail categories across three metropolitan areas in Sweden. Using a range of business intelligence tools to automate the analysis we extend their methodology to assess the impact of changing spatial scale by location type in a major Canada metropolitan market – the Greater Toronto Area. Our findings, while identifying and reporting upon clusters of co-location, serve to highlight the spatial sensitivity of results dependent on the scale of the chosen grid cells. We discuss the way in which retailers and planners could use such an approach within their decision-making activities. The paper concludes by forwarding an agenda for future research to refine the spatial framework of co-location analysis.

**Keywords:**

retail, co-location, business geography, spatial analysis

## Projecting Climate Change Impacts and Risks to Human Health in Ontario: The impacts

**Herod, Kristen (University of Toronto- Scarborough)**

**Vidya Anderson (University of Toronto-Scarborough)**

**Kristen Herod (University of Toronto-Scarborough)**

To assess the impact of a changing climate on human health in Ontario, a climate modelling study was undertaken to project the health impacts of climate change across Ontario's 36 public health units. For a more robust assessment, this study used Ontario-focused high resolution climate projections produced through various provincially funded regional climate modelling projects. Climate change projections were developed for Ontario's 36 public health unit areas looking at temperature and precipitation changes and extremes. Model projections were established for the period of the 2030s, 2050s and 2080s. These projections helped forecast key health risks across the 36 public health units – primarily heat, air quality, flooding and vector-borne disease. As part of this study, health related climate variables were identified, including extreme temperature and precipitation. Numerical and graphical representations to illustrate the spatial distribution of projected health risks over the 36 PHUs have also been developed

**Keywords:**

climate change, health, Ontario

## Weather Sensitivity and the Implications of Climate Change for Park Visitation: A case study of Pinery Provincial Park (Ontario, Canada)

**Hewer, Micah (University of Toronto-Scarborough)**

**Scott, D. (University of Waterloo)**

**Fenech, A. (University of Prince Edward Island)**

Daily park visitation and historical weather data from 2000-2009 for Pinery Provincial Park in southern Ontario (Canada) was analysed to determine the weather sensitivity of park visitation. Three different seasonal weather sensitivity regression models were constructed (peak, shoulder and off season models). Critical temperature thresholds were identified for each season using ANOVA and regression. A partial sensitivity analysis for the impact of a warmer, wetter climate on park visitation was conducted. Temperatures over 33°C during the peak season and over 29°C during the shoulder season indicated critical temperature thresholds at which point conditions that were “too hot” for some caused a decline in visitation. Furthermore, temperatures below 11°C indicated another critical temperature threshold, where conditions were “too cold” for most and therefore park visitation was less sensitive to temperature variability below this threshold. In response to the projected warmer, wetter climate, the weather sensitivity models suggested that for each additional degree Celsius of warming experienced, despite increasing precipitation and more frequent heat extremes, annual visitation could increase by 3.1 percent. The projected increase in park visitation as a result of rising temperatures is mainly associated with shoulder season visitation and only minor increases in peak season visitation.

### **Keywords:**

weather sensitivity; temperature thresholds; climate change impacts; park visitation

Advice and pro-environmental behavior. Do incentives undermine information?

**Hoicka, Christina (York University)**

In the literature, information and incentives are often combined to encourage pro-environmental behavior, for example, in encouraging household investment in energy retrofits. Based in qualitative analysis of interviews with home energy advisors, and quantitative analysis of energy advice and decisions made by homeowner participants, this paper presents an analysis of a home energy retrofit advice program (based in a house as a system approach) as it was offered in a mid-sized city in Ontario. The findings are that the introduction of an incentive caused participants to withdraw from learning from advisors or seeking information. They subsequently narrowed their options, and did not follow the best advice offered under the house as a system approach. The authors conclude with an analysis of program design options that would increase the pull of participants towards energy information that would result in higher impact retrofits with respect to energy use.

**Keywords:**

Information, incentives, retrofits, learning

## ESTABLISHING A CODE OF CONDUCT FOR VISITORS TO THE TRADITIONAL LANDS OF THE LUTSEL K'E DENE FIRST NATION

**Holmes, Allison (University of Waterloo)**

**Grimwood, Bryan, S., R.(University of Waterloo)**

**King, Lauren (University of Waterloo)**

**Lutsel K'e Dene (First Nation, Community Associate)**

This presentation reports on one aspect of an ongoing collaborative, community-based project involving representatives of the Lutsel K'e Dene First Nation (LKDFN) in the Northwest Territories and researchers from the University of Waterloo. Through the narrative analysis of stories told by LKDFN members, this study aims to develop a code of conduct for visitors to the vast LKDFN traditional lands, including the Thelon River watershed which is geographically separated from the community itself. While taking a critical perspective of the current literature on codes of conduct in the tourism industry (e.g. Cole, 2007; Malloy & Fennell, 1998) and referring to the concept of indigenizing research (e.g. Higgins-Desbiolles, 2009), this study seeks to indigenize tourism ethics and the process of developing a visitor code of conduct. Currently, this literature is dominated by western perspectives and there is limited focus on a community-driven approach to the development of codes of conduct. This study is founded on a community-based participatory research methodology that seeks to raise the voices of a people who have been historically marginalized (e.g. Castleden, Morgan & Lam, 2012; Israel et al., 2005). It considers the code of conduct as a potential tool for self-determination, as a mechanism that exerts "the right to control their institutions, territories, resources, social orders and cultures without external domination or interference" (Berman, Lyons & Falk, 1993, p. 191). This study is currently in the analysis phase, and the anticipated outcome is a tangible document for visitors to LKDFN traditional lands that highlights the stories told by community members.

**Keywords:**

community-based participatory research; visitor code of conduct; Lutsel K'e Dene First Nation; narrative analysis

## Let's take this outside: Mapping learning outcomes associated with field courses in post-secondary geography and environmental studies

**Hooykaas, Amanda (University of Waterloo)**

Educators generally agree that the application of theory is critical when educating post-secondary students about ways to respond to serious social, economic, and environmental challenges. Students must be presented with real-world scenarios and, better yet, immersion in these environments in order to develop understanding, communication skills, and the ability to assess issues in well-considered ways. Field courses are an avenue for developing this type of learner. Rooted in the philosophy of such educational theorists as Albert North Whitehead, David Greenwood, and Kurt Hahn, intended learning outcomes can be readily achieved through immersive experiences. In the contemporary post-secondary experience – in particular in universities – there is a widespread institutional interest in offering such experiences but feasibility of the plans may be weak and curriculum linkages uncertain. By connecting theory and practice, it is possible to better equip graduates to grapple with today's challenging environments.

This presentation will offer a general overview of the state of field courses in [and out of] post-secondary institutions in Canada and identify exemplars connecting classroom and field. It will also consider whether educators are achieving desired learning outcomes through such experiential approaches. In the process of discussing how to “take it outside,” it is possible to enhance awareness of current innovative pedagogy and engender conversations on the availability and suitability of field courses in geography and environmental studies programs across Canada.

**Keywords:**

learning outcomes, field courses, post-secondary, mapping

Examining vulnerability of winter road systems to the lifestyle of First Nations communities as a consequence of climate change

**Hori, Y.\* (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Gough, W.A. (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Tam, B.Y (Department of Environment and Resource Studies, University of Waterloo)**

**Tsuji, L.J.S. (Health Studies, University of Toronto Scarborough)**

Winter roads consist of ice roads over land, frozen lakes, and rivers. A network of winter roads in northern Ontario connects approximately 30 remote-northern First Nations communities to permanent roads and railways. In recent years, there has been increasing concern that climate change is projected to shorten the viable operating season of winter roads, and the quality of the roads has been decreased due to a warmer climate. The purpose of this study is to explore current vulnerability of James Bay Cree communities in northern Ontario regarding physical, socio-economic, cultural impacts associated with changing winter road seasons and the viability of the roads. Concept mapping was applied not only to examine interrelationships between winter roads and their potential impacts on First Nations communities but also to gain a holistic view of how to adapt to future changes. The concept map helped to develop the semi-directed interview questions that will be used to collect the Traditional Environmental Knowledge (or Indigenous Knowledge) data from two First Nations communities: Fort Albany First Nation in Fort Albany, Ontario; Weenusk First Nation in Peawanuck, Ontario. This presentation will focus on the methodology and preliminary results of the study that develop effective and feasible adaptation strategies for remote aboriginal communities in northern Ontario.

**Keywords:**

aboriginal issues, climate change, James Bay, winter roads

## Ethical Consumption: There's an App for That Studying the Role of Information and Technology in Ethical Consumption Using the Buycott App

**Horst, Naomi (University of Guelph)**

There is a significant attitude-behaviour gap which exists among consumers. While a large number of consumers state their intentions to consume ethically, only a small percentage of these ethical purchases occur. In order to encourage more ethical consumption behaviour, it is suggested that consumers need an increased understanding of production practices and the effects of their personal consumption. Advancements in technology have enabled mobile phones to act as a resource for consumer knowledge. In particular, an application called Buycott has been developed, with the potential to serve as an important tool for providing consumers with the information necessary to make ethical decisions. However, the impacts of these tools on consumer behaviour have not been explored from an academic perspective. This research examines the relationship between consumer decision making, technology, and information through an assessment of participant use of the Buycott application. In doing so, this presentation seeks to evaluate the role that mobile communications technology enabled information, via the Buycott app, plays in consumer decision making.

**Keywords:**

ethical consumption, information, consumer behaviour, technology

## Honeywell and the Production of the Military Normal on the Southside of Minneapolis

**Hugill, David (York University)**

Little seemed out of the ordinary when, in the early 1980s, the Honeywell Corporation agreed to support the formation of a nonprofit enterprise that sought to provide livelihoods to “hard to employ” residents of an inner city Minneapolis district. Such investments were a critical means to generate positive PR for a company that had been dogged by almost weekly protests against its production of guidance systems for nuclear warheads. It was in this context that Honeywell began funneling production contracts to Phillips Works (PW), as the startup social enterprise came to be called. It turned out, however, that Honeywell’s investments in PW were controversial in their own right. In 1986, it was revealed that PW was involved in the production of two of Honeywell’s most reviled weapons. Thus while the neighborhood enterprise had won initial praise as a difference maker, it had quickly become shrouded in controversy. What’s interesting, however, is that Honeywell itself saw thought efforts to be uncontroversial. Others, meanwhile, insisted that the program did little more than employ low-income people to build weapons that would, inevitably, target other low-income people in far away places. My paper will examine this controversy in the context of what Lutz (2009) calls the “military normal,” the material and discursive process by which American militarism is rendered “ordinary” and banal.

## An Evaluation of Thunderstorm Observations in Ontario

**Huryh, S. M.\* (Climate Lab, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

**Gough, W.A. (Climate Lab, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

**Butler, K.A. (Climate Lab, Department of Computer and Mathematical Sciences, University of Toronto Scarborough)**

**Mohsin, T. (Climate Lab, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

In order to project future trends in a climate variable it is necessary to establish a baseline. In Canada, records of thunderstorm events dating back to the 1950s are available through Environment Canada's climate data archives. These records are based on human observations at airports and may be subject to bias. In the late 1990s an automated network for detecting lightning in Canada was established. This project seeks to determine the reliability of manual observations of thunderstorms at airports in Ontario with a weather observer on duty full time. Historical thunderstorm data is being compared to data from the Canadian Lightning Detection Network. For a given distance around each airport, hourly thunderstorm data is being compared to the occurrence of lightning. Preliminary results indicate that manual observations in terms of number of thunderstorm hours may only be reliable for a small distance around each reporting station. The percentage of storms that are not reported also varies from airport to airport. The results will determine if the archived climate data appears sufficiently reliable for climate change studies, or if one should approach the dataset with caution.

**Keywords:**

thunderstorm, lightning, climatology

## Evaluating Housing Quality in Ghana with GIS and Analytic Hierarchy Process

**Hussey, Lucia Kafui (Western University)**  
**Malczewski, Jacek (Western University)**

Housing conditions in Ghana are affected by a number of factors including: the physical features of buildings (structural material, dwelling types, and housing services), socio-economic aspects (tenure and household density), and environmental issues (modes of solid waste and liquid waste disposal). This study focuses on an evaluation of housing quality at the district level using Geographic Information Systems (GIS) and Analytic Hierarchy Process (AHP). The GIS-based AHP approach allows for examining spatial patterns of housing quality. It also provides a tool for identifying the relative importance of each factor involved in the process of evaluating housing quality. The results of this study indicate that there is considerable spatial variability of housing quality in Ghana. The predominant tendency in the spatial pattern of housing quality is the north-south effect. The lowest quality of housing is found in the north part of the country and it tends to increase southwards. There is also substantial local variability of housing quality in the south section of the country where districts of highest housing quality are adjacent to areas characterized by relatively low quality of housing. The results underscore the need for area-based housing interventions to tackle housing problems in specific districts.

**Keywords:**

Geographic Information Systems (GIS), Analytic Hierarchy Process (AHP), Housing Quality, Ghana.

## Geographical Videography

### **Jeff, Boggs (Brock University)**

In recent years, a range of scholarship has emerged on 'flipped courses' and 'blended learning' as a new form of pedagogy. Central to this pedagogy is the creation, curation or both of short videos that students watch before attending lecture, lab or seminar. Flipped course proponents note that students watching these are then prepared for activities (i.e., learning objects) conducted in the face-to-face portion of the course in order to apply the concepts and procedures demonstrated in the recently watched videos. Students are alleged to demonstrate superior performance as a result of this.

Drawing on observations from two years of running a flipped, mandatory introductory statistics course for geography majors, this was not my experience. Student scores were not appreciably different from those in previous versions of the course. In retrospect, there were four problems that contributed to this. First, many students did not prepare for lecture by watching the videos. Second, many students lacked the basic mathematical skills needed to comprehend basic descriptive and inferential statistics, though again this is not new a factor. Third, scenario-based exams (with optional extra credit from algorithmically generated drills) replaced the previous mix of final exam, labs and algorithmically-generated online drills. Scenario-based exams, while useful for assessing students' ability to apply concepts, place a higher cognitive load on students. Additionally, a purely exam-based approach might also disadvantage students with test anxiety. Thus, this form of delivery makes it difficult to compare scores from the flipped delivery mode with scores from pure lecture and lab delivery mode. Fourth, preparing these resources took much longer than expected, even when largely relying on well-designed, free materials by YouTube math instructors. I conclude with recommendations on how to implement flipped courses using your own and others videos.

#### **Keywords:**

pedagogy; YouTube; statistics; learning

## Roundtable Governance and the Greening of the Global Beef Industry: Lessons from the Roundtable on Sustainable Palm Oil (RSPO)

**Johnson, Adrienne (Clark University)**

Industry-led 'roundtables' are increasingly being relied upon to manage and control environmental resources. Emerging in many commodity sectors involving palm oil, cotton, cacao, biomaterials, and most recently beef production, roundtable arrangements are significantly transforming the way human-environment relations are governed, resulting in uneven and unequal effects. Roundtables purportedly grant more actors (especially marginalized ones) opportunities to become involved in decision-making processes, yielding more transparent, legitimate, and inclusive production decisions. Given their industry-dominated nature however, roundtables also grant corporations far-reaching powers, shaping them into the ultimate authorities in the production, processing, and distribution of environmental resources. In this paper, I use the well-established Roundtable on Sustainable Palm Oil (RSPO) as a lens to analyze the emergence and functioning of the up-and-coming Global Roundtable on Sustainable Beef (GRSB). This paper analyzes the exclusionary terms of 'consultation' within these fora, the actual principles and criteria and their effects, and finally, roundtable approaches to agricultural and livestock disease management to demonstrate the creeping authority of capitalist roundtables in governing the futures of palm oil and beef production. The paper argues that through roundtable governance initiatives, commercial actors appear to have become more accountable, transparent, and inclusive in their governing actions but much of this appears to be symbolic; in many cases roundtable governance has often reinforced power inequalities and unsustainable practices inherent to related capitalist industries. It is speculated that the GRSB and beef production may follow the same fate of the RSPO if some lessons are not properly gleaned from the RSPO experience.

**Keywords:**

roundtable; environmental governance; palm oil; beef production

## Public Space, Power and Resistance in the City

**Kaur, Amardeep (York University)**

This paper focuses on public transit in Toronto and the ways in which racialized immigrants experience and negotiate their mobility within the city's increasing socio-spatial divide. Recent studies have noted the higher usage of public transit amongst immigrant groups and yet there is a lack of transit accessibility and walkability in the inner suburbs of Toronto (Hulchanski 2010; Hess and Farrow 2011). This spatial disparity can have dire consequences given that transit as a public sphere connects to the economic, socio-cultural and political life of a city. Informed by an environmental justice framework, the study deployed an interdisciplinary lens to better understand these inter-relationships. 9 qualitative interviews were conducted with immigrants living in Toronto and who were recruited through snowballing technique. The interviews generated key insights on the challenges immigrants face with transportation in the city. These include participants' strong concern for the affordability of transit, the poor servicing and connectivity of bus networks, and their resulting difficulty in accessing work opportunities across the urban region. Gendered activities such as grocery shopping and travelling with children were also expressed as a key struggle and were often related to issues of the built environment and lack of accessibility. With the push towards sustainable forms of transportation, smart growth and new urbanism in the political and planning agenda of Toronto, it is important to address social equity in transit expansion and ensure a more transit-conducive built environment in both urban and suburban spaces of Toronto.

**Keywords:**

public transit, Toronto, immigrants, built environment

# Government Policy and Renewable Energy Development in the United States and Canada: Biofuel

**Kedron, Peter (Ryerson University)**

Policy support of industrial competitiveness is a topic of ongoing debate across national contexts. Increasing concern about the impacts of climate change has introduced that debate to the development of renewable energy industries. Within the United States, biofuel accounts for 50 percent of renewable energy production. In Canada, biofuels account for two percent of renewable energy production. However, in both nations the biofuel industry is itself composed of a series of related industry interests which collectively form a geographically extended value chain that connects biotechnology, agricultural processing, and chemical manufacturing. Government programs support each segment of the biofuel industry value chain through policies that simultaneously act as industrial and environmental governance. However, policy and market uncertainties have destabilized the geographic organization of the biofuel value chain and created regional patterns of convergence and divergence as competing technologies emerge in parallel in different locations. Shifts in state and provincial policy have matched the reorientation national support toward development of second-generation cellulosic-technologies.

Using a comparative approach, this paper contrasts the role of alternative policy combinations in the development of alternative pathways to industrial biofuel production in the U.S. and Canada. To exploit locally abundant resource stocks and draw necessary innovation to their regions, local policy makers and interest groups create policy bundles that alter industrial development trajectories. The effectiveness and impact of those policies depends on their match with technological, market, and related policy conditions at multiple spatial scales. This analysis contributes to theoretical discussions of regional governance and policy innovation by highlighting how emerging interconnections between industry interests combine with the support of policy to create new industries. Methodologically, this analysis emphasizes the increasing need to develop and refine analytical tools capable of examining overlapping industrial relationships as stakeholders balance environmental and industrial considerations. Implications for policy are also discussed.

**Keywords:**

Environmental Governance, Bioeconomy, Policy

## Alternative Transnational Economies: Canada, the Philippines and the Progressive Possibility of Rethinking Migrant Remittance Flows

**Kelly, Philip (York University)**

In recent years, the Philippines has been among Canada's top sources of immigrants, and is also a major source of temporary foreign workers. As a result, transnational social and economic ties between the two countries are extensive. For example, Canada now represents the Philippines' third largest source of remittances. Generally, these ties operate at a privatized inter-household level, as money and gifts are transferred to Philippine families from workers and immigrants in Canada. This paper will ask whether there is potential for this individualized transnationalism to be harnessed into a more collective effort to create a wider array of beneficiaries in the Philippines. This could be through processes of volunteerism, collective investment, philanthropy or social enterprise. These processes represent an alternative and heterodox economy based on imperatives of love, care, and collectivism, rather than the orthodox economic logics of private accumulation and utility maximization.

**Keywords:**

Remittances; Alternative Economies; Migrant Transnationalism

# Use of a Least-Distance Buffer to Conceptualize Activity Spaces in Mental Health Research: An Urban Case Study of Persons with Severe Mental Illness in Toronto

**Kidd, Sean (CAMH)**

**Lalla, Rajiv\* (CAMH)**

**Frederick, Tyler (University of Ontario Institute of Technology)**

**Tarasoff, Lesley (University of Toronto)**

**Virdee, Gursharan (CAMH)**

**Day, Angela (University of Toronto)**

**(\*Presenting Author)**

Activity spaces define the extents of a person's daily activities and habitual routines. Traditional approaches to the conceptualization of these spaces have been limited primarily to the analysis of point locations using the Standard Deviational Ellipse (SDE). However, this technique continues to present the limitation of over- or underestimation of the true extent of a person's activity. The SDE also obscures the identification of outlier locations in a person's regular spatial pattern of movement. In mental health research, the activity space of people with diagnoses of severe mental illness provides a strong representation of their degree of integration or isolation in their community. A preliminary exploration of a least-distance buffer generated from the points comprising a person's activity space suggests that it provides a more reliable approximation. A sub-analysis within the Community Integration Study at the Center for Addiction and Mental Health (CAMH) attempts to examine the applicability of this method as an alternative to conceptualizing activity space in mental health research. It utilises a mixed-methods approach to compare the statistical differences between calculated activity space areas (using the SDE and least-distance buffer methods) to the qualitative responses of participants with respect to their own perceptions of the activity space. Findings of this analysis will be of interest to mental health researchers attempting to understand the role of space in mental health clients for the purposes of service delivery, and resource accessibility planning.

## **Keywords:**

Mental Health, Spatial Analysis, Activity Space

## Unpacking power during the negotiation of co-management agreements between Indigenous peoples and the government in northern Canada

**King, Lauren (University of Waterloo)**

Co-management is fundamentally about sharing power (Berkes et al., 1991). This leads to the following question: How much power should be, and is typically, shared? In the absence of a land claim agreement, the degree to which power is shared between Indigenous peoples and the government is determined during the negotiation of co-management agreements. These actors possess different types and degrees of power, which directly affect their ability to negotiate the co-management agreement. Surprisingly, how power differentials between the different actors engaged in negotiation affect the process and outcomes have not been thoroughly and systematically examined (Jentoft, 2007; Nadasdy 2003, 2005; Njaya et al., 2012; Raik et al., 2008; Sandstrom, 2009). This presentation will make the case for the need to unpack power by employing multi-layered models of power to the negotiation of co-management agreements in the context of northern national park reserves. The presentation will begin by highlighting the dominant power-sharing discourse in the co-management literature, characterized by 'instrumental', instead of 'empowered' co-management. The reasons instrumental co-management is more prevalent will be explored by focusing on the negotiation phase of co-management arrangements. Multi-layered power models may provide a theoretical framework for understanding the power dynamics that affect the negotiation of co-management arrangements. These power models share an emphasis on analyzing power at the individual actor, institutional, and structural levels. The presentation will address each level of the power models individually, with a particular focus on Pierre Bourdieu's social practice theoretical framework. Importance will be placed on how actors' actions are either enabled or constrained by existing institutional and structural systems of power.

**Keywords:**

co-management, protected areas, power, negotiations

## Tree genera classification using LiDAR data: quality of training samples

**Ko, Connie (York University)**

**Rommel, Tarmo K (York University)**

**Sohn, Gunho, (York University)**

For supervised classifications, training samples are required. However, the method of selection and the selection of training samples are often a subjective choice. Samples collected from LiDAR data often vary in quality, a common problem in the acquisition of 3D tree objects. First, this variability could be caused by the scanning angle where some portions of the tree can become occluded by other objects or trees. Second, trees that grow close together tend to have intertwined branches that make segmentation of point clouds to single-tree objects quite difficult and prone to erroneous inclusions or exclusions. Third, trees growing under differing environmental conditions can manifest vastly different forms; the degree of variability further increases when tree age classes differ widely. As a result, samples of a common tree species can appear very different, even with consistently acquired LiDAR data. Thus the observed variability and quality in sample appearance is interesting to characterize and investigate. We took advantage of the variability observed within the same genera and improve classification results by maximizing variability in the training samples. This project classifies 186 trees into three genera, pine, poplar and maple. An unknown class is generated for trees that do not belong to any of the class label. Classification accuracy improved from 72.8% if training samples are selected randomly (with stratified sample size), to 93.8% if samples are selected with criteria.

### **Keywords:**

LiDAR, classification, Random Forests, training samples

# Exploring the Social and Spatial Factors for Chronic Diseases in Toronto and Chicago Neighbourhoods

**Kolpak, Patrycja (Ryerson University)**

Health research has demonstrated that living conditions, namely the social determinants of health, are relevant factors that can help explain disparities in chronic disease prevalence. These determinants also include the availability of health care resources. This study combines the social determinants of health framework with potential spatial accessibility models to determine whether potential spatial accessibility to primary care physicians (PCPs) and hospitals and social factors relate to, or predict, poor health outcomes, represented by diabetes, high blood pressure and stroke, among Toronto neighbourhood and Chicago community populations. The conventional health resource-to-population ratios and Two Step Floating Catchment Area (2SFCA) access scores to PCPs and hospitals revealed disparities between the downtown core and suburban fringes of both cities within 5 and 10km travel thresholds. However, the potential accessibility measures were not strongly correlated with the poor health measures. Statistical analyses showed that neighbourhoods and communities with high levels of poverty, unemployment, low education attainment (below bachelor degree) and certain ethnicities (South American and African) tended to be significantly positively correlated with prevalence rates of the poor health measures. The multivariate linear regression models revealed that low education (high school) and ethnicity were significant predictors for the variance in prevalence rates of the poor health measures. The findings were largely consistent with previous literature, reaffirming that social determinants of health explain the prevalence of poor health across neighbourhoods. This study also demonstrates ways to identify and quantify the relative importance of spatial and contextual factors with chronic conditions at the neighbourhood-level.

**Keywords:**

Social Determinants of Health, Accessibility, Chronic Conditions, Neighbourhoods

## Leveraging geopolitical, geosocial, and geoeconomic privilege: whiteness, tropicality, and the international peacemaker in Colombia

**Koopman, Sara (York University)**

Many geographers, notably Cowen and Smith, have argued that the geopolitical era has shifted to the geoeconomic. Sparke has recently argued that it is more useful to see how the two have been and continue to be entangled, and used to mask each other. Global racial imaginaries are also caught up in this knot, and I propose that these could be usefully understood as geosocial dynamics. I explore this idea through the case of Colombia. Wade argued that race is regionalized in Colombia and Appelbaum extended that argument, showing how region is also raced, and how that process is gendered. I build on these arguments about space and race in Colombia by highlighting the role of colonial geographical imaginaries of tropicality in these constructions. Tropicality continues to involve imaginaries not only of the 'tropics' but also of its opposite, the 'white Andes' - imagined as more modern, peaceful, and closer to Europe. Race in Colombia is not only regionalized, but also internationalized. Today international peacemakers in Colombia tap in to these imaginaries to protect Colombian peace and justice activists under threat, leveraging geosocial, geoeconomic, and geopolitical privilege to support those working to change these very systems.

**Keywords:**

peace, geopolitics, tropicality, whiteness

## Is there a Soviet Present in Kazakhstan: New Nationalism and Old Figures in Karaganda's Everyday Landscapes

**Kopack, Robert (University of Toronto)**

In Kazakhstan, there is no formula for dealing with Soviet historical landscapes that include sites of commemoration, memorials, public art, and other ideological relics that appear in ordinary places like parks and the sides of buildings. The towering statue of Vladimir Lenin was an ordinary part of the downtown landscape for decades. He was relocated recently to another park. What does moving him suggest? This conference paper focuses on the city of Karaganda and the interplay of Soviet and Kazakh historical, political, and cultural spaces. The research informing this work was geared toward an analysis of the post-Soviet period and asked whether or not sweeping attempts were made in Kazakhstan to de-Sovietize the landscape so heavily endowed with ideological artifacts. By looking at Karaganda specifically, my work brings a far lesser known city (at least in North America) into view and one with a Soviet pedigree that would conjure up the impossible to undo. As I show, historical figures and events of the Soviet past intermingle tightly with new symbols of an ascendant Kazakh nationalism. Indeed at times, the proximity of heavily symbolic spaces, sites of commemoration, and public art is so close as to be extremely puzzling. On the one hand, the Soviet Union is anathema to Kazakhstan. The histories of the Gulag and Stalinist repression have been emblazoned into the landscape with new memorial sites as recently as 2011. In other instances, the Soviet Union is celebrated for its science, technology, and industry. Cold War heroes like the cosmonaut Yuri Gagarin are extolled along with Karaganda's centrality to the heroic Soviet industrialization drive beginning in the 1930s. While Astana has been targeted by western academic cynicism for its high profile glitz and kitsch, Karaganda is in comparison quite ordinary. Does the very 'ordinariness' of it actually have real political underpinnings?

## Impact of Remittance Behaviour on Immigrant Housing Ownership Trajectories: An Analysis of the Longitudinal Survey of Immigrants in Canada from 2001-2005.

**Kuure, Vincent (University of Waterloo)**

**Arku Godwin (Western University)**

**Luginaah Isaac (Western University)**

Although housing ownership is recognised as an important marker of immigrant integration in Canada, overall evidence suggest a declining trend in housing ownership among immigrants in the last two decades. The factors which scholars have focused on in their attempt to explain immigrant housing trajectories and overall housing ownership trends tend to be dominated by immigrant characteristics and the circumstances prevailing in the housing market. This research extends this attempt at understanding immigrant housing trajectories by examining the influence of remittances. Using data from the longitudinal survey of immigrants in Canada (LSIC) we applied negative log-log regression modelling techniques to examine the influence of remittances on housing ownership over time among recent immigrants in Canada. The results indicate that participation in remittance in wave one has negative consequences for housing ownership over time. The findings makes a case for the inclusion of immigrant transnational engagement in the attempt to explain immigrant integration.

**Keywords:**

Immigrant, housing trajectories, transnational activities, remittance, homeownership

## Exploring the discourse of skills mismatch in Ghana

**Kyeremeh, Emmanuel (Brock University)**

Skills mismatch as a phenomenon is an issue that has been given much attention recently. In seeking to understand this concept, terms such as skills gap and skills shortage are often explained in tandem with it. However, these are additional, distinct concepts are phenomena that have merited various explorations of their own. This highlights the messiness surrounding the concept of skills mismatch. Bearing this in mind, I examine the discourse of and around skills mismatch in Ghana. Specifically, this paper asks the question; 'how is the issue of skills mismatch understood in Ghana'. In order to achieve this objective, discourse analysis was employed on a recent policy brief (Bawakyillenuo et al, 2013) that contends there is a skills mismatch in Ghana. I also analyse other related key policy documents. I draw on the policy mobilities literature to determine if and how the concept of skills mismatch has been adopted from outside Ghana. I find that discussions on skills mismatch in Ghana are linked with the absence of soft skills among workers in general and graduate of tertiary education in particular. In addition, the discourse surrounding tertiary education suggests that tertiary education is not providing graduates with the required skills to survive in the workplace. Finally, this paper reveals that Bawakyillenuo's study solidifies the discourse of skills mismatch in Ghana which is the same position that is asserted by some employers in Ghana.

**Keywords:**

skills mismatch, discourse, tertiary education, policy mobilities

## Wind trends in northern Ontario: Model-based climate projection and validation

**Lachat, Daniel (York University)**

**Bello, Richard (York University)**

**Higuchi, Kaz (York University)**

Wind trends in the northern half of Ontario generated by the Regional Climate Model (RCM) PRECIS (driven by the HadCM3 ensemble of coupled ocean-atmosphere global circulation model) have been analyzed and evaluated. Three-hourly averages of the zonal and meridional wind components were analyzed for the period 1960 to 2095. Results show significant uncreasing wind trends, reaching more than 0.01 m s<sup>-1</sup> year<sup>-1</sup> some regions. These trends are characterized by strong seasonality, with maximum trends occurring in the winter and minimum in the summer. Moreover, there seems to be a decreasing spatial gradient from the coast to the inland area.

Due to the poor measurement coverage in the remote northern regions of Ontario, the validation of these findings has been conducted using the North American Regional Reanalysis (NARR) data. The validation has been carried out for the period 1980 to 1990 over a 10 x 1 degree strip in the far northern region of Ontario, including both coastal and inland areas.

Overall, a linear correlation coefficient of 0.616 between the monthly mean PRECIS and the NARR data for wind trends is obtained. There is a seasonality in the correlation, with a relatively good agreement in the summer, but an overestimation by PRECIS in the winter. Compared to the NARR data, horizontal gradients in PRECIS are stronger with distance from the Hudson Bay coast. Since the model agreement is not constant over time, these differences cannot be corrected with a simple offset or a linear correction function, instead one can restrict the PRECIS-data to the season and spatial domain for which the agreement with the NARR model is statistically significant.

### **Keywords:**

wind trends, PRECIS, NARR, validation

## Mobilizing resources: community organizing for social justice

**Laliberte, Nicole (University of Toronto-Mississauga)**

**Aveena, Anzar (University of Toronto-Mississauga)**

**Rabab, Fatima (University of Toronto-Mississauga)**

In this paper, we examine the concept of 'resourceful' communities in relation to community mobilization around issues of social justice. We ask how and why community organizing occurs in three distinct situations in order to highlight the determination of individuals and groups to make social change while also examining the circumstances that brought them to the point of doing so. The first case examines how the lack of government involvement in providing food services within the Peel Region is compensated for by food banks staffed by volunteers. The second case investigates the divergence in governmental resources allocated to community consultations for economic class immigrants versus asylum-seekers and the effects this differential has on community organizing. Finally, we draw on research from northern Uganda in which a group of displaced persons formed a grassroots human rights organization to address the continued violence in their lives despite (or because of) governmental and humanitarian interventions. The first two case studies are still in the preliminary phase of qualitative research including surveys and semi-structured interviews while the third is based on a year of ethnographic research. The goal in bringing these divergent case studies together is to explore the idea of community organizing as a form of resourcefulness. Our work suggests that while the celebration of community mobilization towards social justice is important, it should not obfuscate structural injustices that perpetuate inequality and make such local interventions necessary.

**Keywords:**

human rights, social justice, activism, community

## Using Location Quotient and Shift-Share analyses to understand the spatial profile of Adult Offenders in Community-based Corrections in Ontario

**Lalla, Rajiv (Ryerson University)**  
**Kedron, Peter (Ryerson University)**

The Ontario Ministry of Community Safety and Correctional Services is currently at the end of a 5-year strategic plan to improve its operations and fulfilment of its core mandate. This plan comprised of five goals, one of which aims to improve the delivery of correctional services for both community and institutionally-based offenders. Using data for community-based offenders, this study applies the location quotient and shift-share analysis techniques to gain an understanding of the changing offender profile across the province of Ontario. The Risk-Need-Responsivity model of offender classification was quantified to fit the contexts of a spatial analysis of changing offender dimensions of risk, need, responsivity and override from 2004 to 2013. From the findings of this study, the London-Core and St. Catharines areas showed the slowest and fastest rates of decline respectively for the highest priority offenders in the Ministry framework. At the regional level, the North area showed concerning trends for the highest risk, and need offenders in the most recent five-year period. The results of this study provide a static snapshot of the offender profile for a defined time period, and indicates the concentration of offenders of a given dimension type along with a relative rate of change along terms of growth or decline. Implications of these findings to theory, policy and method are discussed.

**Keywords:**

Offender Management, Community Corrections, Location Quotient, Shift-Share

## Forecasting the Influence of Climate Change on Extreme Ground-level Ozone Events in the Downtown Areas of Toronto and Windsor, Ontario, Canada

**Leung, Kinson (University of Toronto-Scarborough)**

**Gough, W.A.(University of Toronto-Scarborough)**

Increasingly, it is becoming clear that climate change is affecting both the physical and social environments, often in ways unanticipated. The relationship between climate change and air pollution is becoming or will become one of the major concerns to many people living in southern Ontario, Canada. Ground-level ozone (O<sub>3</sub>) is perhaps one of the most familiar pollutants in Ontario because it is associated with most smog alerts in the province. The goal of this study is to statistically downscale the Toronto and Windsor ground-level-ozoneconcentration data with the general circulation model (GCM) and use the model output to forecast the influences, the changes, and the probabilities of occurrence of future Extreme Ground-level Ozone Events that occurs in the Toronto and Windsor Downtown areas under different climate-change scenarios. The downscaling method used in this research to generate climate-change scenarios was the Statistical DownScaling Model (SDSM) version 4.2.2. SDSM is a hybrid of regression-based and stochastic weather-generator downscaling methods. The result from this research has suggested that there will be approximately 20 - 30% of gradual increase of daily maximum ozone-concentrations in the next eight decades. The result also forecasted that the probabilities of occurrence of Extreme Ground-level Ozone events with the O<sub>3</sub> concentration  $\geq 80$  ppb (the current Ontario 1-hour Ambient Air Quality criterion for extreme ozone concentration) will gradually increase to three times of what we are experiencing today in the two downtown areas by the year of 2100 under the different future scenarios of the Coupled Global Climate Model (CGCM3).

**Keywords:**

extreme ground-level ozone, climate change, statistical downscaling, air quality

## Impacts of Changing Wind Conditions on Airports in Northern Canada

**Leung, A.C.W.\* (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Gough, W.A. (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Butler, K.A. (Climate Lab, Department of Computer and Mathematical Sciences, University of Toronto Scarborough)**

While seaports in northern Canadian communities benefit from thinner sea ice and shorter sea ice duration for resupply in summer, the communities continue to depend on air service for travel year-round and transporting goods when the passage is closed by ice. A number of airport locations in the northern Canada were chosen for analysis on the changes of historical surface wind patterns. We found that wind speed significantly increased in some location which may affect the operation of the airport and the safety of the aircraft during takeoff and landing. Seasonal variability in wind speed can also be seen, suggesting that these locations may be affected by circulation patterns in broader scales in parts of the year. Airports can adapt to the changing wind conditions in several ways but are costly to implement.

**Keywords:**

wind speed, transportation, aviation

## Missing the Target? A case study of Target stores in Toronto and Mississauga.

**Leydon, Joseph (University of Toronto -Mississauga)**

**Bucko, Katherine (University of Toronto-Mississauga)**

**Iqbal, Sarah (University of Toronto-Mississauga)**

**Tavares, Josephine (University of Toronto-Mississauga)**

Target began its Canadian operations in 2011 through its acquisition of the lease agreements of existing Zeller's stores. Its entry to the Canadian market was long anticipated with predictions that it would have major impacts on the organization of Canadian retail, as did the arrival of Walmart a decade earlier. To date, the performance of Target has been disappoint, its impact on the organization of retail limited and its future in Canada remains uncertain.

This paper investigates Target operations at select locations in Toronto and Mississauga. The research reports on the levels and the composition of consumer traffic at Target stores and provides a comparison with Walmart stores at similar locations. Observation of store layout, produce mix and display, pricing and customer service at Target and Walmart stores further advances the comparison of the two retailers. Consideration is given to media commentary and consumer blogs and the response of Target to criticism. The performance of Target is contextualized with reference to changes in the Canadian retail economy over the past decade.

### **Keywords:**

Canadian retail organization, Target, Wal-Mart, consumer preferences

## Is neighborhood socioeconomic status associated with fast food accessibility? A spatial analysis of the Region of Waterloo

**Luan, Hui (University of Waterloo)**  
**Quick, Matt (University of Waterloo)**

The increasing prevalence of obesity has been insufficiently explained by individual-level social and psychological factors and, as a result, research focus has been directed to environmental and neighborhood-scale risk factors. One important neighborhood factor is the food environment. Access to unhealthy foods, and fast food in particular, may be spatially and socioeconomically structured such that neighborhoods with low socioeconomic status have higher accessibility to fast food restaurants and are disproportionately exposed to the risk of obesity. This study explores the relationship between neighborhood socioeconomic status and fast food accessibility in the Region of Waterloo, Ontario. Non-spatial regression results show that neighborhood fast food accessibility varies with socioeconomic status for the region. High accessibility, that is, low average distance between neighborhood centroids and three closest fast food restaurants, was positively associated with percentage of lone parent families, percent of immigrant residents, and one-year residential mobility rate. Using Geographically Weighted Regression, local relationships between socioeconomic characteristics and fast food accessibility were identified. This research contributes to our understanding of how neighborhood characteristics are related to food environments and highlights specific areas where policymakers including land use planners and public health practitioners should focus for future research regarding obesity risk factors and food environments.

### **Keywords:**

spatial analysis; food accessibility; socioeconomic status

## The Unintended Consequences of Gender-Based Forced Migration from Central America to the United States: How Asylum Seekers Participate in a Cycle of Domestic Violence

**Mabry, Shaun (York University)**

Victims of domestic violence in Central America frequently flee to the United States to seek asylum. Many of these asylum seekers leave behind vulnerable family members when they escape from abusive situations. Some of those left behind family members, in turn, suffer domestic violence at the hands of the same aggressor that caused the original asylum seeker to flee. Those left behind family members then, in many cases, form a second wave of forced migration. Until recently, these gender-based asylum seekers faced an uncertain legal landscape regarding the viability of their claims. On August 24, 2014, the Board of Immigration Appeals issued a landmark decision in *Matter of A-R-C-G, et. al.*, 26 I&N Dec. 388 (BIA 2014) recognizing that “married women in Guatemala who are unable to leave their relationship” constitutes a Particular Social Group for purposes of asylum and withholding of removal in the United States. With a more certain avenue to asylee status, it is likely that more domestic violence victims from Central America will seek asylum in the United States. This increased flow of gender-based migrants will likely amplify the number of family members left behind and, therefore, contribute to an additional secondary wave of forced migration.

**Keywords:**

gender, forced migration, Latin America

## “The City Council should pass a traffic law to keep the people moving on”: Contesting Toronto’s sidewalks, 1880s-1920s

**Mackintosh, Phillip Gordon (Brock University)**

Sidewalks represent the coincident social production of public space and technocratic and legal production of urban flow – as we would expect in the contradictory modern city (Berman 1982). Accordingly, historical Toronto reveals the simultaneity and complexity of both ideals, as pedestrians negotiated lived life and modernizing expectations on the city’s sidewalks. Following Mitchell (2003), Low and Smith (2006) and Blomley (2011), we know that public space is never given, only socially produced and maintained through intense political struggle. Toronto’s sidewalks, from roughly the 1880s to the 1920s, to varying and somewhat ironic degrees, support such a view. Thus it is possible to posit the presence of two competing and salient realities on the sidewalks of late Victorian, Edwardian, and Interwar Toronto. The first I call pedestrian publicity: the simple act living city life on sidewalks. Because much of urban life and especially impoverished life was lived outdoors, historical sidewalks presented an obvious locus for that living. The second contradicts the first. Efficient walking describes an extant technocratic urban contention that sidewalks existed –were provided – to expedite modernism’s interest in the flow of people, traffic, goods, services, and money. And while Toronto’s police oversaw the latter, the vigorousness of the former suggests the attempt to reduce sidewalks to mere flow was not easy.

### **Keywords:**

Sidewalks, Modernism, Public Space, Toronto

## Nutrient Retention in the Minesing Wetlands

**Maglalang, Alexis (University of Toronto- Mississauga)**

**Wilson, Heather (University of Toronto-Mississauga)**

**Yip, Vivian (University of Toronto-Mississauga)**

Increasingly, focus is placed on wetland ecosystems in their capacity as filters of urban and agricultural runoff through the retention and removal of pollutants, resulting in overall improvements in water quality. Although the literature largely supports the theory of wetlands as important filters, in some circumstances the role of wetlands remains unclear. The Minesing Wetlands is a large wetland complex located near Barrie, and is bisected by the Nottawasaga River and surrounded by agricultural lands with a history of drainage alterations. Several ditches specifically constructed to minimize interaction with the wetland flow through Minesing at various points, draining nearby agricultural fields. According to the Nottawasaga Conservation Authority, the water quality of the Nottawasaga River worsens after leaving the Minesing Wetlands, as compared to the up-wetland environment. Accordingly, we examined the effectiveness of the nutrient retention of the marsh. Throughout the 2014 growing season water samples were collected along a main drainage ditch into the Nottawasaga River for analysis of nitrate and soluble reactive phosphate. Concentrations of both nutrients at the start of the ditch were well above CCME water quality guidelines, but only 100 metres further into the wetland the concentrations decreased to levels well below these guidelines. The decreased levels are likely a result of the wetland's flat topography, slow flow rate and low discharge which caused increased contact time and opportunity for mineral sedimentation in addition to greater biological uptake of nutrients. According to these results we concluded that the drainage ditch functions effectively and another unknown factor is responsible for the poor water quality of the Nottawasaga .

**Keywords:**

buffering capacity, wetlands, water quality, agricultural runoff

## “In your own backyard”: The geographical restructuring of human trafficking prevention in Toronto

**Magpayo, Allison (York University)**

In October 2013 the City of Toronto partnered with the Toronto Counter Human Trafficking Network- a coalition comprised of women’s advocacy groups, faith-based organizations, social service providers, and other local groups concerned with human trafficking- to launch a series of public roundtables aimed at gaining community input on the development of a cohesive, city-wide human trafficking response model. This paper draws on speeches, videos, and print media from Toronto’s first human trafficking roundtable to explore the role of anti-trafficking initiatives in the construction and reproduction of vulnerable spaces. This paper attempts to respond to several key questions: How do anti-trafficking initiatives shape public perceptions about the vulnerability or safety of particular spaces in Toronto? What assumptions concerning victims, perpetrators, and solutions are embedded within the city’s dominant anti-trafficking discourses? What is at stake in the proliferation or entrenchment of anti-trafficking campaigns within hitherto untargeted city spaces? Preliminary findings suggest that fears about trafficking have led to increases in the surveillance, regulation and policing of particular bodies and places, calibrated according to a class-oriented, gendered and racial profile. The malleability of the concept of human trafficking has also made it an attractive vehicle for the management of other ‘social problems’, effectively turning counter-trafficking programs into tools for cutting down on sex work, migration, and other ‘undesirable’ behaviours while expanding the reach of the state in to new social spaces. Given the widening scope of anti-trafficking activities in Canada, and the ongoing nature of the roundtable series in Toronto, this is a critical time to evaluate how perceptions about human trafficking are being produced, transformed, transmitted, and experienced within the spaces of our daily lives.

# Ice Storm Damage in Two Swamps of Southern Ontario: An Investigation of Precipitation Partitioning and Biogeochemical Fluxes

**Malone, Matthew (University of Toronto-Mississauga)**  
**Duval, Tim P (University of Toronto-Mississauga)**

This paper presents the investigation of the quantity and quality of stemflow (SF) and throughfall (TF) during precipitation (P) events of two swamps in southern Ontario. With the aid of this research, wetland conservation and management authorities can obtain crucial information regarding the fluxes of water and nutrients into swamp ecosystems pre- and post- ice storm. This investigation will address the following objectives: [1] Quantify the amount of P that is reaching the wetland floor and how it differs between two seasons separated by a damaging ice storm. [2] Determine the P characteristics that dictate TF and SF amounts (i.e. amount of P, duration, intensity, temporal lag). [3] Quantify the flux of nutrients contained within the TF and SF water that are delivered to the wetland floor. These objectives were investigated using field and laboratory measurements following each rain event for the study period (May 1- September 30, 2013 and 2014). 2013 Results: [1] TF for the ash-dominated swamp averaged 92% of P and SF was 3%. Maple swamp TF and SF were 78% and 2%, respectively. [2] The results suggest a positive linear relationship between amount of P, duration of rain events and P intensity to both TF and SF depths. [3] CDOM values, an index of dissolved organic carbon, were significantly higher for SF than TF, with no difference between maple and ash swamps. These pre-ice storm results from 2013 will be compared to data from the past growing season.

**Keywords:**

THROUGHFALL, STEMFLOW, ICE STORM

## On seeking resilience in community-based adaptation to climate change in Bangladesh

**Mamun, Md. Abdullah Al (Wilfrid Laurier University)**

This research is to evaluate country level community-based climate adaption programs and my focus is Bangladesh and which is treated as a hotspot of climate related risks. It will investigate how robust is country level climate adaptation programs in social and ecological terms. Resilience refers to a capacity of a system to bounce back into its original state after a shock. At present resilient approaches are widely used in climate change literature as many risks and vulnerabilities have social and ecological origins. However, a broad based adaption research framework that integrates both social and ecological issues concerning community-based climate change adaption is yet to develop. For this research, a case study approach is used along with triangulation of data from different sources such as published state level reports related to climate change. Four types of resources are chosen where adaptation projects are ongoing or local communities in Bangladesh are working with government from the past to face resource challenges (losses of fisheries production) and climatic threats (winter shortage of waters for irrigation). Research findings indicate that country level adaptation process is disintegrated in terms of addressing social-ecological factors and outcomes may have negative impacts in near future. This research finding has global and regional significance and may help promoting agenda of climate related organizations interested in community-based climate adaption programs.

# Biosolid Facility Siting and Rural Residents' Changing Sense of Place and Emotional Geographies

**Mason, Sarah (Western University)**

**Luginaah, Isaac (Western University)**

In the Township of Southgate, Ontario a proposed biosolid (sewage sludge) processing facility has resulted in such hostile community conflict and emotional impact that friends and family members now physically sit on opposite sides of their congregation depending on their opinion of the new facility. When assessing techno-industrial developments it is important to consider how these industries are affecting residents' emotional geographies and changing sense of place. Southgate Township's biosolid processing facility and subsequent land application of the fertilizer end product has elicited particularly strong emotional stimuli as it is altering the ways local residents perceive their landscape, local food sources, and neighborhood as a safe tranquil place, which is evoking core emotions and values. Utilizing in-depth interviews (n=22), this paper examines narratives around feelings of 'community' in Southgate Township as well as further examining the emotional impacts residents experienced. This work draws on theoretical constructs of rural sociology, sensual and emotional geographies and the pastoral rural landscape and is situated within the wider conceptualization of the risk society. The results suggest some residents believe the facility is not "right" for the community, show embodiment of health risks and child safety, coping strategies adopted, and demonstrate the broader emotional impacts of the siting process. Although defining measurable health or environmental impacts may be difficult and uncertain, the emotional impacts and community conflict that has resulted from the siting process surrounding this facility is a detrimental effect.

**Keywords:**

biosolids, emotional geographies, facility siting, community conflict

## A Statistical Analysis on Atlantic Hurricanes; Is the Worst Yet to Come?

**Masson, A. (Climate Lab, Department of Physical & Environmental Sciences, University of Toronto Scarborough)**

Each summer, North America welcomes not only the warm temperatures and long summer days but also the start of Hurricane Season. Hurricane Season runs from June 1 to November 30 each year. However, each season is different with regards to the frequency and intensity of hurricanes forming in the North Atlantic Ocean.

This research identifies if there has been a shift in the frequency of hurricanes developing, as well as determining if there is an increase in the amount of landfalling Atlantic Hurricanes. North America has been experiencing an increase in landfalling hurricanes since 1980. Additionally, areas such as New England, Atlantic Canada, and even countries as far as Portugal and the United Kingdom are showing an increase in hurricane activity. This increase in landfalling hurricanes has put human lives and property at risk. However, is this increase part of a cyclical cycle or is it due to climate change?

The focus of this research was to quantify hurricanes and landfalling hurricanes in the North Atlantic from 1980 to 2010, to determine if there has been a shift in the past 30 years. Utilizing the Atlantic Multidecadal Oscillation (AMO) and the North Atlantic Oscillation Index (NAO), this research looked at ways to forecast future Hurricane Seasons to identify if hurricanes will continue to increase and affect areas of North America.

**Keywords:**

hurricanes, climate change, tropical cyclones, severe weather

## Social dimensions of human-elephant conflict: A case study of Botswana's Boteti region

**Mayberry, Allie (University of Guelph)**  
**Hovorka, Alice (University of Guelph)**

High elephant densities in Botswana's rural north, combined with widespread human settlement, has led to increased interspecies conflict. Humans and elephants must share limited resources including water, fodder and land, and their struggle to do so harmoniously affects the daily lives and routines of both species, impeding both wildlife conservation and community development initiatives. As documented within existing scholarship, conflict with elephant generates material consequences for humans such as injury or death, agricultural crop loss, and property destruction. Yet social consequences, such as fear of potential loss and inability to fulfill social roles, remain unexamined, poorly addressed, or over-simplified. As such, the implications of human-elephant conflict are not fully understood.

Through the case of Khumaga village, this paper uses a socially-grounded approach to explore the nature of human-elephant relations in Botswana's Boteti region. From May through August 2014, over 70 semi-structured and key informant interviews were conducted to assess the perceived impacts of elephants on the daily lives, routines, and overall well-being of humans. Preliminary results show that participants are most concerned about food security and ability to access essential veld resources. Additionally, participants feel that elephants restrict their freedom of movement and instill feelings of insecurity and fear. Furthermore, most reported elephant encounters occurred in the veld rather than Khumaga village itself suggesting that human-elephant conflict is spatial in nature. These findings suggest that the consequences of human-elephant conflict extend beyond visible impacts. The hidden dimensions listed above merit equal consideration in the implementation of local conflict mitigation efforts.

**Keywords:**

animal geography; human-elephant conflict; social perspectives

## “Mobs”, “Herds” and “Hordes”: A Hermeneutical Approach to Tourist and Place Representation in English Language Travel Narratives about Italy

**McClinchey, Kelley (Wilfrid Laurier University)**

Travel writers have represented Italy in non-fiction travel memoirs, travelogues and news articles since the Grand Tour. But there have been substantial increases in the number of these travel texts since the publication of, and subsequent films, *Under the Tuscan Sun* and *Eat Pray Love*. Why have so many travelers written, and still write, about Italy? Can we learn about place and tourist experiences from the way Italy is captured through different forms of media? Recently, tourism scholars have argued for increasing the use of less traditional -- and more qualitative -- methods for analyzing tourism phenomena. Phenomenology, in particular, does not merely call for an account of things we see in our world but shifts the focus to our “seeing” of objects and the world and the meaning they hold. In this study, twenty-six English language travel texts were analyzed for representations of Italy using hermeneutic phenomenology. This philosophy gets inside the texts, within the context they were written, and understands the subjective perspectives of the authors. Using latent content analysis, relevant themes emerged concerning place and tourist representation. One theme specifically highlighted the way authors represent “the tourist”. Authors overwhelmingly describe tourists negatively, viewing themselves as better than “them”; even though these authors were at one point tourists. Applying postmodern thinking, it is suggested that we may need to re-conceptualize our traditional post-colonial understanding of “the Other” in lieu of increasing global processes, various forms of mobility, including tourism, within our contemporary world.

## “Foreigners in wi own land?” Understanding the Socio-Economic Challenges Created by Mass Tourism on the North Coast of Jamaica

**McFarlane-Morris, Shenika (Western University)**

Mass tourism development in the Global South is widely celebrated as a major source of jobs and foreign exchange, but it is also widely criticized for establishing spatially and economically segregated enclaves that frequently have negative social, cultural, and environmental impacts. The overarching objective of this paper is to examine the ways in which the rapid development of mass tourism simultaneously generates challenges for local socio-economic development in the historic town of Falmouth which has been dramatically altered by the recent construction of the country's biggest cruise ship-oriented harbour-front development. In order to achieve this objective, I mainly focus on the factors which act as barriers to the interaction of local people, that is the residents, craft vendors and fishermen with this fairly new 'tourist space' and by extension, the magnitude to which they have been able to reap benefits from it in meaningful and equitable ways. The primary methods of investigation were surveys and depth interviews with community members, fisher-folk and key informants within relevant governmental departments. The study reveals that even though mass tourism has had some amount of positive socio-economic impacts on local community development, serious concerns are being raised about the quality and equitability of such.

**Keywords:**

mass tourism; exclusion; enclave; Jamaica.

## Water Security for Northern Communities; a case study in Iqaluit, Nunavut

**Medeiros, Andrew (York University)**

**Peters, Jessica F (Wilfrid Laurier University)**

**Wood, Patricia K. (York University)**

**Edwards, Thomas W.D (University of Waterloo)**

Fresh water resources in the Arctic are a critical component for the sustainability of ecosystems and northern peoples. Recent environmental change across the north has significantly altered the hydrologic balance of many watersheds, and brought renewed focus on water security. Surveys completed in the city of Iqaluit, Nunavut, during summer of 2014 established that residents have concerns about both the quantity and quality of their local watersheds. Recent focus on northern development has led to expanding populations and increased urbanization that exerts high demands on municipal water supplies. Likewise, decreased winter precipitation has led to severe evaporative stress during dry summer periods. Residents note that it is common to run out of water, as water supply and infrastructure are overburdened. Several water quality concerns are also identified, as water sources within proximity to urban areas suffer from a myriad of pollutants. In order to evaluate these threats to water security for northerners, we have employed a multi-proxy approach to quantify the water balance of local watersheds, as well as evaluate the health of these systems through examination of biotic indicators of water quality. Legacy contamination sources, industrial inputs of heavy metals, and urban nutrient addition to several local streams are identified as significantly impairing water quality. We also note that several lakes have experienced periods of significant evaporative water loss. Our results support the concerns of local residents, and highlight the need to address water security issues in northern communities under continued development pressure in a warming environment.

### **Keywords:**

arctic, water security, biotic impairment, hydrology

## Racially Biased Policing and Neighbourhood Characteristics: A Case Study in Toronto, Canada

**Meng, Yunliang (Central Connecticut State University)**

This study investigated race-and-place profiling in Toronto within a neighbourhood context. It explored the spatial association between race-specific drug-related stops and neighbourhood racial and socio-economic characteristics. The findings of this study suggest that Blacks are subject to disproportionately more stops for drug-related reasons in neighbourhoods where more Whites reside and are less socio-economically disadvantaged, therefore confirming race-and-place profiling of Blacks in Toronto. However, race concentration and socio-economic disadvantage arguments fail to explain the spatial variations in drug-related stops of Whites. This result could be caused by the diverse ethnic origins and socio-economic backgrounds of White Torontonians. This article argues for the importance of a contextualized examination of racial profiling within the spatial context of neighbourhoods and calls for democratic policing in Toronto. It also discusses the negative impacts of race-and-place profiling on Blacks in Toronto.

**Keywords:**

Race-and-place Profiling, Neighbourhood Characteristics, Police Stops, Toronto

## Identifying Salinization through Multispectral Band Analysis: Lake Urmia, Iran

**Mitchell, Danielle (Ryerson University)**  
**Forsythe, Wayne (Ryerson University)**

Lake Urmia, located in the Iranian provinces of West and East Azerbaijan, has been gradually, yet dramatically shrinking since the late 20th century. Surface water fluctuation up until the late 1990's never caused any reason for alarm. Since 1998, Lake Urmia has lost a devastating amount of water. Reasons for the lakes demise have been related to climate change and poor water resource management practices within the lakes watershed. If predictions of total drought become a reality, millions of people living within the Lake Urmia watershed will be faced with life altering environmental conditions. A remote sensing based analysis of multispectral imagery was used to identify changes in key features (lake water, saline features and agricultural land) and analyze the magnitude of salinization over space and time. Landsat 5 (1990, 1998, and 2006) and Landsat 8 (2013) images (acquired from USGS Earth Explorer) were analyzed at approximately 8 year intervals between 1990 and 2013. Spectral bands from the visible and near-infrared (VNIR) range were used to classify features; with the additional inputs of the thermal infrared (TIR) and Tasseled Cap Transformation (TCT) bands to highlight the reflectiveness of features. Change detection analysis of the results highlighted an alarming surface water decrease and expansion of saline features during the analysis period. From 1998 to 2013: water area decreased by 3146 square kilometres from a maximum extent of 4995 square kilometres to 1849 square kilometres, saline features increased by 898 square kilometres to cover an area of 1022 square kilometres from 124 square kilometres and vegetation cover increased from 1159 square kilometres to 1656 square kilometres.

**Keywords:**

Lake Urmia, salinization, Landsat, water loss

## Analysis of the Micro-climatology of the Green Roof at Toronto

**Mohsin, Tanzina (University of Toronto- Scarborough)**

Due to increasing urbanization and associated climate change, the mitigation of urban warming by building green structures became an integral process to create comfortable open spaces in urban areas. The microclimatic conditions in urban areas are affected by the solar and terrestrial radiation, wind, air temperature, humidity and precipitation among others. The energy partitioning in a green space is different from that in an urban concrete. Urban green structure such as green roofs can cool hot air by evapotranspiration, shade the ground and walls, and ultimately reduce the radiant temperature. In green roofs, stored moistures within the vegetation evaporate either directly from the roof-surface or are released from plants by transpiration and thus generate the evaporative cooling. In this study, the temperature distribution and humidity of an urban station, Toronto City, are compared with that from a Green Roof station located near the city, for four seasons to study the micro-climatology of the green roof. The results from the analysis of both daily and hourly data suggested that out of the four seasons, spring, winter and fall seasons are mainly benefited by the cooling effect of the green roof. In some hours during the day, the temperature of the green roof exceeded from that of the city core. This can be accounted for by the fact that the green roof is situated near a major highway, Don Valley Parkway, which may have caused the increase in ozone emission during rush hours and thereby, amplified the localized warming associated with these hours.

**Keywords:**

Microclimatology, Green Roof, Urban warming, Toronto

Picking for packing; objects of travel and their role in making travel experiences

**Mostolizadeh, Sayedali (University of Waterloo)**  
**Nepal, Sanjay (University of Waterloo)**

Objects are significant and integral elements that are tied up with one's travel. The objects picked to be packed in travelers' luggage are significant in what people will experience, how they experience, and the way individuals perform in their travel (Burrell, 2008). Articulating the importance of objects of travel, our study aims at providing a functional classification of these objects by following their transformations and biography (Appadurai, 1986) as socialized and socializing materials in the performance of travel. To fulfill this purpose, we focus on the contents of accompanied luggage of travelers and what they ferry between home and away. Targeting undergraduate/graduate students of University of Waterloo at Canada, we conducted a qualitative survey in which we asked our participants to answer our two key questions about important objects they will pack during their travel away from home and upon their return from a hypothetical travel to an unknown destination.

Applying a post-human ontology and the epistemological guidance of actor-network theory, this study, raises critical questions about i) the exploitative ways of looking at non-humans in the commercially reading of tourism; ii) representational approaches to tourism with which materiality of objects has been reduced to mute signs and metaphors, and iii) extreme philosophical approaches to incorporating humanism in tourism scholarship at the expense of less attention to non-humans.

## Sound, Camera, Walk: Ethnography of a recreational walking performance through videography

**Mostolizadeh, Sayedali (University of Waterloo)**  
**Torabian, Pooneh (University of Waterloo)**

Taking a camcorder, going to the heart of the Mother Nature in a hiking trail, walking along the path, paying attention to every single step of our walk, capturing meaningful shots of our on-foot practice, we ethnographically tried to narrate the story of walking in our one-day recreational trip. Although in our approach to this study walking was a purposeful activity, our purpose was not to arrive somewhere specific, rather we explored walking as “suit of bodily performances that include observing, monitoring, remembering, listening, touching, crouching and climbing” (Ingold & Lee, 2008, p.5). In our ethnographic exploration of walking performance, we promote videography as a useful tool for meaning making. Videography provides researchers with opportunities to create, narrate, and communicate their ethnographic stories enriched with visual, audible, sensual, embodied, and placed-based capabilities of videos.

Ingold, T., & Vergunst, J. L. (2008). Introduction, In T. Ingold, & J. L. Vergunst (eds.). *Ways of walking: Ethnography and practice on foot.* (pp. 1-19), Hampshire: Ashgate Publishing, Ltd.

## Employment Trajectories of Filipino LICP participants: Over-representation in Personal Support Work & Related Health Professions

**Mulas, Catherine (York University)**

My SSHRC-funded Master's Thesis seeks to understand the institutional and social regulation of labour markets in order to explain the patterns of over-representation in the Filipino community as Personal Support Workers (PSWs) in Ontario. This paper will focus on the roles of immigrant entry streams, more specifically the Live-In Caregiver Program (LICP), in directing Filipino migrants into employment as PSWs, formerly known as Health Care Aides. In April, 2014, Gabriela Ontario along with Ryerson University and York University completed the first nation-wide survey of 631 Filipino immigrants who completed the LICP. The Gabriela Transitions Experiences Survey (GATES) was conducted to discover the education and employment trajectories of Filipino LICP participants who acquired permanent residency. Based on the survey results, I will present preliminary findings of Filipino LCP participants' employment trajectories into personal support work and other related health professions at the national, provincial (Ontario) and municipal (Greater Toronto Area) scales. The findings provide insight into the employment barriers that participants of the LICP encounter after acquiring permanent resident status. Some of the possible barriers include: deprofessionalization, occupational mismatch between pre-migration and post-migration occupations and a lack of recognition of foreign credentials, which can be attributable to the LICP that does not take human capital into great consideration.

**Keywords:**

Live-In Caregiver Program, migrant employment trajectories, Personal Support Workers, Filipino migrants

## Ash Decline Assessment in Emerald Ash Borer Infested Forests using Remote Sensing Technologies

**Murfitt, Justin (University of Toronto- Mississauga)**

**He, Yuhong (University of Toronto-Mississauga)**

**Mui, Amy (University of Toronto- Mississauga)**

The emerald ash borer (EAB) is an invasive Asian beetle that was first identified in Windsor, Ontario in 2002 where it has since spread throughout the Great Lakes region and into southern areas of Quebec. This pest causes significant damage to ash trees which are a crucial natural resource within Ontario as they make up 1.4 billion dollars in hardwood stocks. As a result of the spatial extent and intensity of the EAB infestation, remote sensing technologies are being evaluated for identifying and mapping early EAB infestation and subsequent stages, and monitoring the spread of the invasion across time. Using a light-weight multispectral sensor, placed on an unmanned aerial vehicle (UAV), the goal of this project is to establish an efficient and reliable remote sensing strategy for identifying and mapping EAB infestation at a range of infestation stages. EAB infestation data and UAV-based remote sensing images were collected from three sites (heavily infested, moderately infested, and low infested) in the Credit Valley Watershed in the summer of 2014. Ash tree health indicators including twig dieback, crown condition, general tree health and canopy transparency were collected in the field and leaf reflectance and chlorophyll content were measured in a wet lab. An ash health rating system was developed to rank ash health based on field and lab data. Linear regression analysis was performed to establish a relationship between remote sensing spectral indices and the ash health rating index. The results indicated that around 53% of ash health status can be explained by remote sensing spectral indices. This regression model will subsequently be used to map ash health status using UAV-based remote sensing images.

**Keywords:**

Emerald Ash Borer, Forest Health

## A Comparison Between the IPCC Fifth Assessment Report's (AR5) and the IPCC Fourth Assessment Report's (AR4) Ability to Simulate Climate Throughout Canada

**Ng, Peter (University of Toronto-Scarborough)**

**Adam Fenec (University of Prince Edward Island)**

**Bill Gough (University of Toronto-Scarborough)**

Advances in observation (particularly satellite imagery) and scientific knowledge have continued to strengthen the link between human activity and climate change. The Fifth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC AR5) provides the most recent and comprehensive update on climate change. Since the last assessment, the introduction of approximately forty different global climate models (GCMs) and the new representative concentration pathways (RCPs) have been central to the development of the IPCC AR5. These global climate models which now stem from 20 different global modeling groups and although varying in size, scope, scale and complexity, promote a new set of climate model experiments. These climate experiments will be run in a parallel process starting with a set of four RCPs based on radiative forcing. This paper will act as a comparative study between the AR5 and its previous assessment the Fourth Assessment Report (AR4) in its ability to simulate climate over Canada. These simulations of climate data will be validated against observations in Canada using the National Center for Environmental Prediction (NCEP) climate re-analysis.

### **Keywords:**

IPCC, global climate models, climate change, AR5

## Leamington Township's Agricultural Landscape Pre and Post the Heinz Company Tomato Supply Era: A Detailed Field-by-Field Comparison of the 2013 and 2014 Cropping Seasons

**Nussli (University of Waterloo)**

**Anwar, Syed M.S (University of Waterloo)**

**Gardner, Scott (University of Guelph)**

**Hickson, Dylan (York University)**

**Shaw, Annie (University of Guelph)**

**Steckley, Zachary J. (University of Waterloo)**

**Vanthof, Vicky R.(University of Waterloo)**

**Sweeney, Stewart J. (Ontario Ministry of Agriculture, Food and Rural Affairs, Guelph)**

Tomato growers and the entire value chain supplying them in the Regional Municipalities of Essex and Chatham-Kent received news in November 2013 of the impending closure of the H.J. Heinz plant in Leamington, Ontario. It had produced the famous Heinz ketchup product, with locally-supplied tomatoes, for more than a century. About one quarter million tons (almost half) of the annual Ontario processing tomato crop were supplied to it. The spatial distribution of 2013 tomato crop fields within the vicinity of Leamington itself was examined by Nussli and Sweeney (2014). The resiliency of tomato production within the Leamington area, in the next several cropping seasons of the post-Heinz era, is the focus of this ongoing study. The Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013a) geospatial polygon framework of this region's farm fields was used to attribute field-by-field mobile mapping observations in 2013 and 2014 that were collected "on-the-fly" with GPS-enabled rugged computers. The 2013 field campaign results, that were captured for all of Essex Region (Sweeney et al., 2013b), were compared with the 2014 crop distribution within concentric radial areas at 5km incremental distances from the Leamington Heinz plant site. Maps and comparative analyses of the 2013 and 2014 Leamington study area tomato crops are presented. The iconic Heinz ketchup manufacture ceased at the plant on June 27, 2014. The total 2014 tomato crop acreage mapped within the study area remained within 10% of the 2013 total.

### **Keywords:**

AGRICULTURAL CROPS MOBILE MAPPING, TOMATOES, LEAMINGTON TOWNSHIP, ONTARIO

## Environmental and health related quality of life: The effects of odour and noise annoyance as health outcomes

**Oiamo, Tor H. (Western University)**  
**Baxter, Jamie (Western University)**  
**Luginaah, Isaac (Western University)**  
**Parr, Joy (Western University)**

Previous research has identified significant associations between odour and noise annoyance and exposure to environmental noise and air pollution. Although the effect of exposure on annoyance is relatively small compared to other individual and context-dependent moderators, the causal framework is complicated by a strong covariance between the two types of annoyance in the absence of co-exposure to noise and pollution. Nonetheless, it is important to gain a better understanding of the relationship between the two types of annoyance, in particular when considering annoyance as an health outcome. This study took place in Windsor, Ontario and exposure data from a noise model and a land use regression study for nitrogen dioxide was used to study effects on subjective responses and self-reported health (SF12v2). The results show a strong covariance between odour annoyance and noise annoyance that depends on levels of co-exposure to air and noise pollution, and furthermore that overall levels of annoyance have a negative effect on quality of life as measured by functional operationalizations of mental and physical health. Results will be discussed in the context of current infrastructure developments in Windsor and more broadly with respect to policies on odour and noise control.

## The Post-Communist Urban Landscape of Bucharest, Romania

**Oliver, Nadine (University of Toronto)**

This study examines the formation of the post-communist urban landscape in Bucharest, Romania, with particular emphasis on the consequences of its transition from a centrally planned, communist political economy to that of a free market system. The lasting legacy of failed communism and a painful, tumultuous transition to a liberal economy has left Bucharest in a deteriorating state, despite its comparative wealth within the country. As a national capital, it is especially crucial that the urban landscape, inundated with outdated totalitarian ideology, be developed such that it expresses and encourages post-communist national identity. However, without efficient, centralized urban planning framework, the effects of post-communist economic liberalism and privatization have contributed to the creation of a chaotic and inefficacious built urban environment. This study traces the geographical dynamics of post-communist urban development in Bucharest through case studies, independent field research, and academic literature. The influences of failed development initiatives, free market real estate practices, and the socio-economic conditions of the city are examined. Theoretical and structural changes experienced by the city during and after its transition from communism and the current conditions and challenges of Bucharest are discussed in order to demonstrate the necessity of comprehensive, enforced urban planning policy in post-communist cities.

**Keywords:**

Post-Communism, International Development, Urban

## From Garden-Cities to Environmental Questions: The Geography of the International Federation for Housing and Planning (1913-1976).

**Outtes, Joel (Universidade Federal do Rio Grande do Sul)**

**Mauer, Thiago (Universidade Federal do Rio Grande do Sul)**

The research investigates the historical process and the development of new ways of thinking about the city and territory by the IFHP - International Federation for Housing and Planning – from its foundation in 1913 to 1976. The IFHP was founded as International Garden-Cities Association and changed its name several times to adapt to new necessities of the institution and the abandonment of the garden-city ideal until its re-birth more recently. The focus of the IFHP changed from garden-cities in the 1910s, town and regional planning in the 1920s (when the name of the institution became International Federation for Town & Country Planning and Garden Cities in 1924, and International Federation for Housing and Town Planning in 1926), the reconstruction of cities devastated by the two world wars; and housing in general from the late 20s to 1960 (when the institution acquired its current name). Traffic begun to appear as a subject in 1925 and reappeared in 1962; the economic development of the third world and the city as a provider of social welfare in the 1960s and specially in 1968. Environmental questions came to the fore from 1964 in the congress of the institution in Jerusalem with a special preoccupation with air pollution and again in the 1976 congress in Helsinki.

### **Keywords:**

International Federation for Housing and Planning, Garden-cities, Urban Geography, International institutions

## Financial Tools and the Banality of Evil: “Third Party Management” in Indian Country

**Pasternak, Shiri (Columbia)**

Hundreds of Indian bands across Canada have lost control over their finances under a policy called “Third Party Management” (TPM). The most sensational case of its imposition was when Prime Minister Harper responded to the emergency housing crisis on the northern Ontario reserve of Attawapiskat by placing the band under TPM. While TPM may not be an ordinary place or thing, it is a ubiquitous yet totally under-researched socio-technical arrangement of settler colonialism in Canada that has expanded the political space of the reserve to the distant corporate offices of mercenary accountants. This paper examines the banality of TPM’s evil: I examine the context of Crown-First Nations fiscal relations in which the policy arose; its widespread use by Canada as a political tool to police “disobedient” bands into compliance with federal Aboriginal agendas; and, its spatial aspects as a financial tool that governs First Nations’ reserves at a distance. I will use the case of Attawapiskat as a case example in this study.

## What is a farmed salmon? Understanding the social life of a seafood commodity from ocean to table

**Patterson, Michele (Vancouver Island University)**

Over the last few decades the world's seafood economy has increasingly become both aquaculture-based and globally traded. One globally traded farmed seafood product that has become highly politicized in British Columbia is farmed Atlantic salmon. This politicization, however, has not affected demand or sales in seafood markets outside BC, with farmed salmon being BC's largest agricultural export, mostly to the USA, and with sales expected to continue to grow. This presentation will discuss new PhD research in cultural geography that attempts to connect the production to consumption cycle to better understand value transformation along the farmed salmon commodity chain. Since commodities have intertwined economic and socio-cultural values (social lives) which are such a fundamental part of everyday human life, a more informed understanding of their complete nature - that fully reflects the production to consumption pathway - may be relevant to how we engage with them. This multi-sited ethnographic research will capture and characterize the social life of farmed salmon by focusing on farmed salmon culture amongst people who produce, process, transport, prepare, sell and eat farmed Atlantic salmon, in research sites across two BC and two California communities.

### **Keywords:**

farmed Atlantic salmon, social life, cultural geography, ethnography

## Governmentality, performativity and sexuality – A scholarly consideration of a drag show in a prison

**Payne, William (York University)**

Carceral geography seeks to understand the institutional space of the prison as a confined and closed space created as a technique of governmentality but also as a space that is both performed and continuously remade. Scholars of this sub-discipline recognize that this institutional form is key to the creation and transformation of identities of people both within and beyond the prison itself and are attentive to understandings of the multiple functions of imprisonment in particular historical contexts. They pay special attention to the porous boundary between the institutional space within prison walls and the non-institutional space outside of it. Geographers of sexualities understand space as the material manifestation of power and recognize that the spaces we inhabit are constituted in a dialectic relationship with ourselves. They recognize that techniques of regulation at the scale of the body are central to a feminist epistemology of institutional practice. The author of this paper seeks to use these two theoretical frames to unpack a concrete experience of attending a drag show in a men's prison in southern Mexico as a researcher at the invitation of local queer activists and with the consent of prison officials. A queer sensibility has the potential to illuminate the contradictory ways in which the disciplining power of the state is mobilized. Special attention is given to relevant contextual circumstances including significant levels of organized crime, violence and impunity as well as recent shifts in the state's orientation to and use of imprisonment.

### **Keywords:**

Queer Geography, Governmentality, Carceral Geography, Geographies of Sexualities

## Copenhagenize Vancouver, Copenhagenize Toronto? Perspectives on bicycling after a semester abroad.

**Picard, Andrew (University of Toronto)**

As the environmental externalities of car-dependency contribute to the growing impacts of climate change, major cities throughout the world are turning towards more ecologically friendly transportation modes such as bicycling. In the case of Copenhagen, its long-term dependence on the bicycle has created a city that extensively updates its infrastructure to maximize rider safety and comfort. Part of this success speaks to the utilitarian identity of Copenhagen cyclists, where the bicycle's primary appreciation stems from convenience and affordability. Not only have such realities produced 'people who happen to ride their bicycles', Copenhagen reminds potential cycle capitals to embrace the benefits of cycling from a more holistic perspective (City of Copenhagen, 2009). This presentation briefly highlights how the City of Copenhagen broadens the foundations of bicycle-oriented planning, and in doing so, makes 'Copenhagenizing' cities such as Vancouver and Toronto possible.

**Keywords:**

bicycling, urban planning, vélomobility

A thawing Arctic: possible alluvial damming of a lake basin downstream of permafrost slumping inferred from a lake sediment record.

**Quinlan, Roberto (York University)**

**Delaney, Stephanie (Brock University)**

**Lamoureux, Scott (Queen's University)**

**Kokelj, Steven (Government of the Northwest Territories)**

**Pisarcic, Michael (Brock University)**

The shape and contours of the Canadian Arctic's surficial landscape are strongly influenced by the presence of permafrost. Thawing permafrost in a warming Arctic is expected to change landscape features, due to phenomena such as retrogressive thaw slumps. These landscape changes within a catchment are expected to have hydrological consequences, affecting Arctic lakes and ponds. In this study we obtained a sediment core from a small lake (informally named "FM1") near Fort McPherson, Northwest Territories, Canada, with a large retrogressive thaw slump (nearly 1 kilometre in diameter) within its catchment. A radiocarbon date from the base of the FM1 sediment core suggests the lake formed between 990-1160 Cal AD. The analysis of aerial photographs indicate the thaw slump initiated between 1970-1990, and sediment geochemistry analysis indicated major changes in sediment content at 54-cm sediment core depth. Midge insects (Chironomidae) preserve in lake and pond sediments and so can be used to reconstruct past environmental changes in an aquatic system. Examination of subfossil midges inferred that FM1 was a shallow bog or wetland environment. Coincident with sediment geochemistry changes that infer the occurrence of a permafrost slump upstream of the lake, midge communities changed to taxa with ecological preferences for deeper openwater, suggesting that FM1 deepened, possibly as a result of alluvial damming from slump materials washing into the lake near its outlet. Most recent stratigraphic intervals infer a reversion back to shallower conditions, with a slight recovery of bog or wetland-associated midge taxa, possibly due to rapid basin infilling from increased deposition rates of catchment-derived materials. Results indicate that alluvial damming due to increased erosion rates in a thawing permafrost landscape is one possible consequence of climate warming in the Arctic that will affect lake and pond ecosystems.

**Keywords:**

Arctic climate change aquatic

## Rifts, Rhythms and Resistance: Exploring Digital Extensions of Everyday Life in the Cyborg City

**Rallis, Nicole (York University)**

In 2010, Google CEO Eric Schmidt noted that, “every two days we create as much information [online] as we did from the dawn of man through 2003”. Our rapidly expanding digital shadows have led many techno optimists to coin the term ‘the big data revolution’, where what and how we know the world is being transformed through data collected online. Consequently, urban life has become increasingly mediated, influence, governed and augmented by online interventions. As we continue to codify more about what we are and what we know in digital shadows, urban social fabrics have become stratified along the lines of those who are connected to cyberspace and those who are not, and also by the rate at which people can access online space.

By engaging with Henri Lefebvre’s work on the production of space and rhythmanalysis, as well as exploring the embodiment and spatialization of Donna Haraway’s cyborg narrative in relation to socio-techno transformations, this paper will attempt to explore how new technologies and their digital extensions of place have transformed our everyday lives and our overall understanding of urban space. How has everyday life been transformed in the global digital age? How does cyberspace manifest itself materially? Why is it important to theorize virtual publics within larger discourses on urban public space?

## Socioeconomic Disparities in Children's Accessibility to Food Environments: An Activity Space Analysis in Toronto, Canada

**Ravensbergen, Léa (University of Toronto)**

**Buliung, Ron (University of Toronto)**

**Wilson, Kathi (University of Toronto)**

**Faulkner, Guy (University of Toronto)**

Childhood overweight and obesity rates in Canada are at concerning levels, more apparently so in individuals from lower socioeconomic classes. Patterns of food consumption, a contributor to body weight, are likely influenced by accessibility and availability of food services in children's neighbourhoods. Previous studies have looked at children's accessibility to food stores in relation to residential neighbourhoods or to schools. These studies, however, do not account for other urban opportunities children may encounter while travelling throughout the city. This study compares the food environments located within the activity spaces of children with contrasting socioeconomic status. By using activity spaces as the spatial unit of analysis, this research answers the call for food environment assessments that consider individuals' movement. The activity spaces are measured on a geographic information system using a modified version of a road network buffer and the shortest path network estimation method. Results show that while children participate in similar numbers of activities regardless of SES, children of higher SES traveled more of their environment than low SES children. Low SES children had higher densities of fast food outlets and supermarkets in their activity spaces than high SES children. This higher density of fast food outlets in low SES children's activity spaces may contribute to the higher prevalence of overweight and obese BMI levels observed in this demographic. The activity space technique used in this analysis has the potential to be used in future studies as a transportation network based measure of accessibility that accounts for mobility.

### **Keywords:**

Food environment, socioeconomic status, children, activity space

## Exploring Forest Tenure and the acquisition of land deeds in Hu Lu Luang, Thailand.

**Roberts, Kimberly (York University)**

Forest tenure and the acquisition of land deeds for forest dwellers in Thailand remains problematic and inconsistent. The Royal Forestry Department (RFD) governs state forests in this decentralized country. This study was conducted in the predominantly ethnic Black Lahu village of Huai Lu Luang in the Chiang Rai province. The village resides on RFD land designated as a forest reserve, has no de jure rights to the land, and with the possibility of the establishment of a RFD Mae Kok River Basin National Park, Huai Lu Luang's current de facto land use rights are tenuous. The threat of eviction and/or restricted use of the forest challenges an already marginalized community that supplement their income and livelihoods through non-timber and timber products from the forest, including: building materials, food, medicine and fodder. This case study evaluates Huai Lu Luangs' site specific land security challenges, their use of the forest as part of an integrated landscape, their land tenure reform efforts, and remaining challenges and lessons learned from their experience.

## Multidisciplinary reflections on waste-as-resource management

**Rollins, Yvonne (Western University)**

For this paper I draw together a series of reflection papers on how themes related to a range of disparate issues (brownfield remediation, supply chain management, historical investigations of environmental issues, industrial symbolism, biofuel production and bird migration patterns) are evoked and framed in separate academic disciplines (engineering, business, environmental history, English, geography and biology). I then apply the themes arising to my research topic of energy recovery from municipal solid waste in Ontario. I do this in order to extend and deepen my understanding of the dynamics attending managing waste as a resource, in terms of: the diverse motivations of public, private and non-government actors; the ways in which issues are initially identified, monitored and resolved or managed; and how philosophical positions of researchers affect the ways in which they apprehend and investigate issues.

Substantively, I find that municipal waste management systems, concerned as they are with exchange and transformation of a heterogeneous set of materials among a range of individuals and organisations, are underpinned by an inherent tension between limiting wastefulness and optimising resourcefulness. Methodologically, I find that this exercise revealed surprising resonances between my research issue and others, which provided a timely jolt during the iterative data gathering and analysis phase of my research.

**Keywords:**

Waste, resource, multi-disciplinary

## Listening to writing: Memoirs as a qualitative source in the study of attachment to place

**Rose, Erin (York University)**

This research examines how senses of home and belonging are (re)constituted in the context of multiple migrations. The project focuses specifically on the experiences of two adult Third Culture Kids – adults who temporarily lived overseas during their childhood years - through a textual analysis of their memoirs: Daniel Coleman’s “The Scent of Eucalyptus” and Tim Bascom’s “Chameleon Days”. The memoirs were analyzed by adapting Carol Gilligan’s Voice-Centred Relational (VCR) method of data analysis which involves multiple ‘listenings’ or readings of the interview text to help bring the researcher into conversation with participants’ inner worlds and multifaceted experience. My aim in choosing this method was to facilitate the hearing of migrants’ voices in order to allow conceptual space for the plurality of ways in which home and belonging are understood and experienced. This paper reflects on the value of using memoirs as source material and the usefulness and challenges associated with adapting the VCR method for textual analysis.

### **Keywords:**

Qualitative Methods, Migration, Place Attachment, Children

## Understanding Sense of Community and Belonging amongst Jamaican Immigrants in Toronto

**Rose, Janine (York University)**

Immigrant organizations are often assumed to promote a sense of belonging and act as representatives of the immigrant groups they serve in new places of residence. Additionally, immigrants may also affiliate or become members of immigrant organizations as these are spaces where they can celebrate or practice cultural values and norms that are specific to their country of origin (Brettel 2009; Vertovec 2003). Still less attention has been paid to how these organizations disrupt sense of belonging to ethnic groups. In this chapter, I examine the relationships between the Jamaican population and Jamaican immigrant organizations in Toronto particularly how this relationship shapes the way Jamaican immigrants construct and understand their communities as well as its implications for sense of belonging. The findings of this research suggests that immigrant organizations that are often assumed to be a source of security and belonging are now emerging as spaces of exclusion and unbelonging. Still, the fact that imagined notions of community continue to be significant for immigrants despite the changing nature of their communities overtime highlights the multiple places that make immigrant groups and the places they inhabit dynamic.

**Keywords:**

Identity, sense of belonging, place, immigrant organizations

## Mobilizations and Negotiations of Institutionality in Queer Geography

**Rosenberg, Rae (York University)**

As queer geographers take up the call to move beyond the theoretical into empirical practices of scholarship concerning the lived experiences of LGBTQ communities, questions arise of what queer research design might entail and what unique experiences queer geographers might have when approaching research institutions for funding, and more specifically approval. This paper discusses the challenges I faced when trying to obtain ethics approval to conduct research with incarcerated trans persons in the United States. My proposed research centered on a qualitative methodological design to work with trans feminine individuals confined in men's carceral facilities across the United States, while working in cooperation with a Montreal-based LGBT prisoner-advocacy organization. The course of receiving Research Ethics Board (REB) approval to conduct my research was lengthy and difficult, and almost prevented the project's undertaking entirely. In this presentation I will discuss the institutional challenges I faced as a queer geographer both in designing my research and in my process to obtain ethics approval, and the ways in which I confronted the institutional regulations that were imposed by the REB. Queer geographers are presented with unique challenges when working with significantly marginalized communities, and we ourselves may have to face biased and uninformed institutional policies when attempting to conduct our work. These forms of institutional pushback can have significant impacts on successfully conducting queer geographic research, and it is critical that we devise and adopt strategies to meet institutional regulations creatively and critically.

**Keywords:**

Queer Geography, Governmentality, Carceral Geography, Methodology

## Indigenous-led Collaborative Conservation: a step towards reconciliation

**Roth, Robin (York University)**

**Thom, Brian (University of Victoria)**

In many areas of the world, it is necessary to build successful conservation partnerships with indigenous communities and yet concrete examples of how to do so from the perspective of indigenous peoples are difficult to encounter. This paper recounts the findings from a research project which focussed on the best practices and lessons learned from conservation partnerships with indigenous communities in Canada. We present the key findings from our detailed conversations with the leaders and practitioners who have built and worked with successful indigenous-conservation partnerships from over ten areas across Canada. Our findings point to essential elements, from structural and legal context of partnership arrangement, strategies for incorporating indigenous knowledge and cultural practice, to the values embodied within interpersonal relationships while navigating these complex matters. The results of our study are hopeful, offering reflection on Canadian challenges and successes, and demonstrating that meaningful conservation partnerships with indigenous communities are possible. The results are particularly timely as indigenous movements around the world, such as Idle No More in Canada, have inspired a renewed debate about the recognition of aboriginal and treaty rights, the role of indigenous peoples environmental decision-making and governance, and the importance of strategic alliances and partnerships between indigenous and settler communities; questions that have been central to the ongoing collaborations between indigenous peoples and their conservation partners. The paper contributes to a renewed political ecology that can respond in part to the demands of indigenous peoples that we be “idle no more”.

**Keywords:**

conservation; political ecology; aboriginal peoples; settler society

## Public Space in the Steel City

**Russumanno, Paolo (Brock University)**

Hamilton is in the midst of an 'urban renaissance' of sorts. Influenced by Florida's 'Creative Class' rhetoric, contemporary Jacobsonian interpretations of 'vibrancy', and a generic 'Work, Live, Play' mantra, Hamiltonians have been encouraged to invest in creative city 'place-making'. At the core of this project is Gore Park, an awkwardly shaped strip in the centre of the city described by boosters as Hamilton's 'jewel'. The park is currently undergoing a large-scaled renovation, expressed in the Gore Park Master Plan and spearheaded by the Downtown Hamilton B.I.A as part of a greater incentive to create an urban landscape that is safe, attractive and vibrant. A consequence of the gradual, and seemingly inevitable 'commodification of urban space' is the legislation of specific urban policies designed to exclude 'undesirables' from accessing public spaces. Major media outlets, government policies and commercially-driven reports such as, Ontario's Safe Streets Act and the Commercial Market Analysis for Downtown Hamilton BIA, contribute to the creative city discourse and underlying initiatives for preemptive action against agents not complicit with the creative city vision. Within fifteen years, Hamilton's core, and in particular Gore Park, proliferates with CCTV surveillance, greater police presence and 'infrastructural' improvements, intended to deter and eliminate unwarranted publics from hindering the modernization process of Hamilton's downtown.

**Keywords:**

Public Space, Hamilton, Privatization, Creative City

## Using 1D S-Transform as a Discrimination Tool in Classification of Hyperspectral Images

**Sahoo, Bhaskar (York University)**

Image classification is a standard part of processing remote sensing data and is based on the assumption that each pixel belongs to a class or theme with a unique spectral signature. Discrimination is a common challenge in remote sensing, which may be defined as the phenomenon where multiple themes exhibit very similar spectral patterns within a wavelength range of interest. As a result, the desired classification accuracy might not be achieved. A robust discrimination technique must have the capability to detect very minor spectral differences between classes with similar spectral signatures. One-dimensional S-Transform, a spectral localization technique, was used to discriminate similar lithologic classes on a hyperspectral satellite image. The efficiency of the S-amplitude spectra in enhancing the spectral information of each pixel of a known class was investigated. We compared the overall accuracy of classified themes using a Support Vector Classification (SVC) scheme, with and without using the enhanced spectral information. We found that SVC aided by spectral enhancement from S-Transform provided better classification accuracy. Thus, this method may prove very useful in scenarios where pixels of a known class are sparse and not easily separable.

**Keywords:**

Remote sensing, Classification, Discrimination, Support Vector Classification (SVC)

## Impacts of the Tar Sands Project to Conventional and Traditional Uses of Water for the Fort Chipewyan People

**Scarfone, Kelsey (Laurentian University)**

The Athabasca River runs through the tar sands development, and flows north to the Peace-Athabasca delta where Fort Chipewyan is located. In this undergraduate study, the impacts of the tar sands on the water uses for the Athabasca First Nation living in Fort Chipewyan First Nation are examined. Both the quality and the quantity of the water available for the use of the people of Fort Chipewyan are being affected by the development. There is evidence that the river is being contaminated by polycyclic aromatic hydrocarbons (PAHs) and heavy metals. This paper uses scientific literature to examine the impacts on the conventional and traditional uses of water for the people of Fort Chipewyan. Conventional uses include activities such as drinking and sanitation. Traditional uses are more unique and represent the relationship First Nations peoples have to the water bodies surrounding them recognizing the importance of fishing and hunting game for sustenance, connections with the land, and all aspects of health. The paper ends with a critical examination of the responses from government and research to this problem and provides suggestions for future study.

**Keywords:**

tar sand, Fort Chipewyan, water, contamination

## Benthic invertebrates in the Mackenzie Delta, Northwest Territories - a preliminary assessment

**Scott, Ryan (York University)**

**Quinlan, Roberto (York University)**

The Mackenzie Delta is the second largest Arctic delta in the world, and the most significant point of discharge into the Arctic Ocean in North America. Despite the importance of the region, the ecology and biodiversity of its aquatic invertebrate fauna remains understudied. These organisms are important as indicators of changes in the aquatic environment, and are likely to be valuable indicators of effects from climate change in the Delta such as changes in timing and severity of spring flooding, changing precipitation patterns and water levels, and melting of the permafrost. Our study aims to survey benthic invertebrates and water chemistry in small lakes across the Mackenzie Delta to elucidate ecological factors controlling community composition and diversity. In this poster we present preliminary results from the first year of sampling, focusing on the southeast corner of the Delta near Inuvik, NT. Species richness was relatively high for the latitude, and the lakes varied widely in the relative percentages of major invertebrate taxa. The effect of water chemistry variables on benthic composition is examined and the relationship between environmental factors (e.g. permafrost and propensity to flood) and the benthic invertebrate communities will be discussed. Future work on food web structure and annual variation is also briefly outlined.

**Keywords:**

Arctic, lakes, invertebrates, floodplains

## Thinking about the agency of the state in development of Contract farming system in India

**Shrimali, Ritika (York University)**

Complex relations of power and exploitation constitute the contract farming production system that includes labourers and marginal peasants at the lowest ladder and big corporations at the top. Such a system of economic relations requires, however, a state to secure the conditions for reproduction of those relations. Based on the information from my fieldwork, this paper seeks to unpack the State's 'agentic' practice in implementing the neoliberal agrarian agenda, one that is guided more by profits of agribusiness corporations and less by national development priorities, i.e. priorities from the standpoint of ordinary workers and small-scale producers. More specifically, I argue that state and business elites act as agents of capitalist social relations that aid in the process of capital accumulation in the realm of agro-production.

**Keywords:**

Development, Agro-Production, State, Neoliberalism, India

# Household Indebtedness and Socio-Spatial Polarization among Immigrant and Visible Minority Neighbourhoods in Canada's Global Cities

**Simone, Dylan (University of Toronto)**

Two key attributes of contemporary global capitalism are on the one hand, financialization and rising household indebtedness, and on the other, high levels of mobility and migration between nations, particularly into the 'global' cities. Among other things, financialization involves the rise of different debt products and relations, including those related to new forms of predatory lending, highlighted by the rise of subprime lending in United States (US) in the run-up to the recent global financial crisis. In the US, it is racialized communities (both those characterized by indigenous black communities and immigrant Hispanics) that have suffered the most from subprime lending and resultant foreclosures. Studies on household debt as it relates to race and immigrant status are scarce outside of the US. This paper investigates levels and types of household indebtedness at the neighbourhood scale among immigrant communities and areas containing more racialized people, in the three largest Canadian cities – Toronto, Montreal, and Vancouver (TMV). In particular, it seeks to understand whether racialized and immigrant neighbourhoods experience higher and more onerous kinds of debt (such as unsecured forms of consumer debt) than other neighbourhoods, and the contours of any correlations between them. Descriptive statistics and regression models demonstrate that neighbourhoods housing immigrant groups, and certain visible minority groups, relate to higher levels of unsecured consumer debts in TMV. More muted and differential results are found among neighbourhoods disproportionately housing particular visible minority groups, although the patterns differ between CMAs. This paper examines the implications of these results, and concludes by way of recommendations for future research and public policy.

**Keywords:**

debt; housing; immigrant; urban theory

## Scales of land cover morphology comprising residual vegetation within boreal wildfire footprints

**Singh, Budhendra (York University)**  
**Rommel, Tarmo K (York University)**

Boreal forests are disturbed annually by fire, insect infestation, disease, harvesting, and severe weather events. Ontario experiences an annual mean of over 1000 fires, affecting over 1.3 million hectares. The post-fire conditions comprise a matrix of burned and partially burned land cover with unburned patches that are ecologically important in providing habitat, food, and seed resources, suppressing pest and disease infestations, facilitating succession, and enabling nutrient cycling and exposing mineral soils for regeneration. Studying the unburned post-fire residuals will help us to assess the effectiveness of emulating natural disturbance patterns with selective harvesting techniques in the boreal forest. We use the morphological spatial pattern analysis (MSPA) tool to quantify spatial patterns in terms of the geometry and connectivity of the landscape features. The core, islet, perforation, edge, loop, bridge, branch, and background features are identified for residual patches extracted from the 55,000 ha RED-084 fire event that burned in northwestern Ontario in 2011. We have measured and tested whether grain size coarsening (4 m to 64 m) and parameter changes alter the frequency of 8 morphological pattern elements within 10 land cover classes. We observed that the most frequent morphological elements were cores, islets, edges and branches at most grain sizes, with an overall decrease in all of the elements as the grain size was increased. There was a significant effect of connectivity on islet pattern areas for each grain size, as islets tend to be converted to branches when 8, rather than 4, neighbourhood pixels are considered. Edge width had a significant effect on core, perforation, edge, loop, and branch patterns for all grain sizes, as an increase in edge width causes cores to become restricted in size leading to increases and disappearances in edge and connector type features. These findings can assist us in developing a set of rules on the composition and configuration of land cover and morphological patterns left behind after harvesting.

**Keywords:**

morphology, boreal, pattern, wildfire, scale

## Preliminary estimation of green house gas flux dynamics at a bay mouth coastal marsh undergoing sediment removal

**Soden, Courtney (University of Toronto-Mississauga)**  
**Duval, Tim. (University of Toronto-Mississauga)**

Wetlands provide immense value to carbon cycling within the environment through integrated relationships between the physical and living parameters within an ecosystem. When rate of sequestration outweigh release, wetlands function as carbon sinks. However due to climate and land use change the parameters governing these valuable sequestration pathways become degraded and can lead to increasing rates of release. Restoration aims to improve or restore ecosystem values. Within the ecosystem these efforts have the potential to result in unintended consequences such as the shift in GHG functionality. This study assesses the GHG flux dynamics at Rattray Marsh throughout the summer immediately following restoration, to determine the impact of sediment removal and exposure of underlying peat on gas exchange. Our data suggest the restored portion of the marsh shows high variability both spatially and throughout the growing season with regards to CH<sub>4</sub>, CO<sub>2</sub> and N<sub>2</sub>O fluxes as compared with a natural, undisturbed area and two within the marsh with varying degrees of sediment accumulation. A gradient of CO<sub>2</sub> release is observed across this site, where the restored area shows the highest CO<sub>2</sub> emissions and the natural site shows the lowest CO<sub>2</sub> emission. CH<sub>4</sub> emissions show large spatial and temporal variability and fluctuate around the threshold for source/sink classification. With regards to N<sub>2</sub>O, high variability was observed but generally negligible. This indicates the negative effects of mineral sedimentation with regards to CH<sub>4</sub> and CO<sub>2</sub> and shows promising results for restoring the sink functionality for GHG's with demineralization restorative efforts.

**Keywords:**

greenhouse gas exchange; marsh; restoration; peat

## An Analysis of the University of Toronto's Controversial Pan-Am Games Astroturf Field

**Spasov, Jessie (York University)**

**Russel, Anna-Kay (York University)**

**Paras, Maria (York University)**

The University of Toronto in cooperation with the Pan-Am Games and the City of Toronto have begun construction on the University's backfield to convert it into a synthetic field composed of turf. The purpose of this study is to determine if the conversion of the backfield could be considered a sustainable project in which it is one that inclusively considers and creates a positive impact on the economic, environmental, and social spheres. The study has consists of interviews, observation of an educational tour of the campus, discourse analysis from local newspapers and environmental journals, and a comparative study to a similar case at Western University. Through these research methods, the study found that the new field would be significantly less sustainable than its previous grassed state. It was found that the turf would cause economic constraints primarily because of the substantially higher cost to maintain the turf field over the relatively low maintenance of the natural grass. It was also deduced that the turf field would dismantle the social fabric of the area, including its significance as a heritage site and common space for the community, as the redesign of the space would restrict the field for athlete's use. In addition, the environment would be affected through the negative impacts of synthetic turf on the surrounding trees, water systems, and overall health of the environment.

**Keywords:**

sustainable backfield turf University of Toronto

# Planning for Seven Generations: Indigenous Planning, The Far North Act, and (De)colonising Community-Based Land Use Planning in Canada

**Stevens, Julia (University of Waterloo)**

**Beatty, Jocelyn (University of Waterloo)**

This paper provides a critical summary of the evolution of Canadian community planning practice and its evolving relationship with Canada's Indigenous communities. In recent decades, a focus on participatory planning for marginalised communities has been emphasised; however, the development of more appropriate '(de)colonised' planning mechanisms has been a slow and arduous process. We have found that even the most nuanced planning mechanisms often fail to account for Indigenous world-views and traditions, resulting in tensions and rejection of prescribed 'solutions'. This has resulted in a movement by Indigenous communities and scholars to reclaim decision-making autonomy through a resurgence of traditional Indigenous-led planning practice.

Through the use of a case study, we critically analyze Ontario's recently passed Far North Planning Act (2010) within the evolving framework of Indigenous-led community land use planning. We found that although the Far North Planning Act has been lauded by many as forward-thinking and community-based, numerous Indigenous communities have condemned the Act as perpetuating top-down patriarchal planning, ultimately being viewed as a missed opportunity for Indigenous-led planning initiatives.

This paper then examines successful Indigenous community-led planning initiatives and provides some recommendations for culturally-nuanced planning structures to be adopted in Canada. Further research and open dialogue between stakeholders can equip governance structures to support Indigenous communities and to transcend tokenistic participatory measures in planning.

**Keywords:**

Indigenous, Land-use Planning, (de)colonisation, community

## Competing Environmental Apocalypses: Post-Politics, the Contestatory, and the Possibility of a Radical Apocalyptic

**Sturm, Tristan (York University)**

**Lustig, Nicholas (University of Buffalo)**

This paper was written in response to Swyngedouw's characterization of contemporary apocalyptic discourses as symptomatic of a "post-political condition", as well as in response to his own calls and those of others for the development of a more radical and emancipatory apocalyptic vision. This paper examines three contemporary apocalyptic discourses: Evangelical, secular eco-activists and scientists, and radical social theorists. While we find considerable evidence that a strong post-political tendency exists in each of these discourses, we also critique Swyngedouw for generalizing all apocalyptic discourses as post-political and techno-managerial reductions of democracy, antagonism, and alternative visions. In our examination of these three apocalyptic discourses we find a greater degree of heterogeneity, competition, and polarization than the characterization of "post-political" would suggest. We also find the post-politicization that occurs in each of these discourses differs from the others in discursive strategy and political intent. Most importantly for us, we find evidence in each of these three apocalyptic discourses of authors or groups of authors crafting systematic critiques of capitalism, championing causes of radical social justice, and collectively contributing to the emergence of a paradigm of radical apocalyptic discourse and politics.

**Keywords:**

radical theory; environmental disasters; post-politics; Swyngedouw; climate change

## An Assessment of Potential Change in Permafrost Distributions along a South-to-North Transect in Canada under Projected Climate Warming Scenarios from 2011 to 2100

**Tam, A.\* (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Gough, W.A. (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

**Xie, C. (Climate Lab, Department of Physical and Environmental Sciences, University of Toronto Scarborough)**

The potential change in permafrost distributions at five Canadian locations within 55°N to 82.5°N were assessed using future climate warming projections. Multiple climate model ensembles were applied to project 21st century climate under IPCC emissions scenarios of A1B, A2, and B1. The difference in the multi-model ensemble means between the model outputs and the observed local climate baselines (1971-2000) ranged from -0.1 to -0.2°C for model validation. Climate change projection results indicate that warming is expected to be above the baseline mean annual air temperatures by +1.5°C (min) and +2.4°C (max) for the period of 2011-2040; +2.6 to +4.1°C for 2041-2070; and, +3.3 to +7.1°C for 2071-2100. The projection results were then applied to calculate the Stefan Frost Number, using site-specific soil thermal properties, to assess the potential change on permafrost distributions. Stefan Frost Number results projected future climate conditions to remain supportive for continuous permafrost distributions within the Canadian High Arctic for the remainder of this century. By 2040, projections in the Low Arctic indicate shifts from continuous to discontinuous permafrost. And, at the southernmost extent within the subarctic region of northern Ontario, climate conditions are expected to be supportive of sporadic permafrost by 2100.

### **Keywords:**

permafrost, climate change, climate modelling, Arctic, Stefan Frost Number

## Toward a spatial understanding of Ontario's sustainable energy transition

**Taylor, Jennifer (University of Toronto)**

While transitions studies have long contributed to enhancing understandings of the complex and multi-dimensional nature of socio-technical shifts toward greater sustainability, they have been critiqued for neglecting the place-specific contexts and network dynamics within which they evolve. Recently, a more explicit spatial perspective on sustainability transitions has contributed to the literature by examining diversity in transition processes in order to explain their geographical unevenness. This follows from recognition of the inherent variability in institutional conditions, networks, actors, resources and technologies that constitute transitions across space. This paper explores the spatial characteristics and dynamics of Ontario's efforts to decarbonize its electricity system by rapidly accelerating the deployment of distributed renewable energy resources. It incorporates a relational, multi-scalar approach to analyzing local and global networks that comprise the renewable energy niche that has emerged over the past decade. It aims to provide greater insight into how a specific locality is positioned within networks operating at multiple scales in the context of an energy transition, why some renewable energy niches upscale, and how local activities and processes themselves create spaces through their own institutional arrangements, power relations, and forms of governance.

**Keywords:**

socio-technical transitions; renewable energy; social network analysis; Ontario

## Inequalities in tourism: The politics of international access

**Torabian, Pooneh (University of Waterloo)**

**Mair, Heather (University of Waterloo)**

Tourism can be seen as a privileged form of mobility (Burns & Novelli, 2008). As Shamir (2005) argued, “differential ability to move in space - and even more so to have access to opportunities for movement – has become a major stratifying force in the global social hierarchy” (p. 200). Mau, Brabandt, Laube, and Roos (2012) argued that the promise of increased mobility in today’s globalized world only holds for members of affluent and privileged countries. They also noted that mobility rights in most cases are a birthright privilege that depends on the person’s nationality. Limitations of movement do not only affect the opportunities to move but also sustain inequalities across countries globally.

So far, tourism researchers have addressed the issue of access in terms of disposable income, gender, and disability (e.g. Small & Darcy, 2011). However, not many studies consider the politics of international access in tourism (e.g. Bianchi & Stephenson, 2014; Hall, 2011), nor make an effort to connect to issues of human rights. As Cole & Eriksson (2011) discussed, since tourism is often taught in business schools, it tends to be seen more as an industry than a system shaped by politics and power. Therefore, human rights issues receive less attention in the tourism literature.

Through this presentation, we discuss how international access is a privilege that is only available to certain populations and is overshadowed by power and politics.

## The hotel sector in an age of uncertainty: A critical labour perspective

**Tufts, Steven (York University)**

This paper provides an analysis of the competitive environment of the global hotel sector. Inspired by a canvas mural produced by hotel workers in Toronto, Canada, the analysis details the major challenges and changes facing the industry from a workers' critical perspective. Specifically, the paper focuses on: hotel service work as emotional labour; the importance of public and private investment; the role of vibrant and healthy cities; speculative real estate; new technologies; the growth of sub-contracting hotel services; work reorganization and multi-tasking; persistent low-wages; and the industry's reliance on labour market diversity. Together these form a complex hotel assemblage which challenges workers and their unions as they struggle to shape future tourism geographies.

## Perceived Self-Efficacy and Adaptation to Climate Change in Coastal Communities in Cambodia

**Ung, Mengieng (Western University)**

**Luginaah, Isaac (Western University)**

**Chuenpagdee, Ratana (Memorial University of Newfoundland)**

**Campbell, Gwyn (Indian Ocean World Centre (IOWC))**

In response to the changing climate, adaptation has become one of the focal points of current research and policy developments. In the context of coastal Cambodia, there is little research on local level adaptation to climate change. Using ordered logistic regression analysis, this study examines perceived self-efficacy and adaptation to climate change among 1823 households in coastal communities in Cambodia. The results show that perceived self-efficacy has positive relationship with adaptation to climate change. Those who thought they have enough information necessary to prepare for the impacts of climate change were more likely (OR=2.59,  $p<0.001$ ) to report adaptive capacity, so do those who believed in their personal preparation to save their lives (OR=15.69,  $p<0.001$ ). Those who believed that climate change can endanger their lives and those who received early warning system about flood/storm events were respectively more likely (OR=7.03,  $p<0.001$  and OR=1.47,  $p<0.01$ ) to report adaptive capacity. As expected, those who reported obstacles to protecting themselves from the impacts of climate change were less likely (OR=0.40,  $p<0.001$ ) to report adaptive capacity. Participants who ranked flood/storm to be higher than other problems in their community were more likely than not (OR=3.24,  $p<0.001$ ) to report capacity to adaptation. Finally, educated individuals were more likely to report adaptation. Policy recommendations on potential climate change adaptation strategies are also discussed.

### **Keywords:**

Climate change adaptation, ordered logistic regression, Coastal Cambodia

## Conflict Free Mineral Certification 2014: Challenges Mapping the Global Tantalum-Niobium Supply Chain

**van Zijl de Jong, Shona (Laurentian University)**

**Leybourne, Matthew (Laurentian University)**

**Ayer, John (Laurentian University)**

**Jago, Bruce (Laurentian University)**

The USA based legal mechanism - Dodd Frank Section 1502 - will have a global impact upon the global supply chain of Tantalum-Niobium (Ta/Nb). The global map of Ta/Nb suppliers will be quantitatively and qualitatively restructured as the Ta/Nb industry supply chain thinks through how to gain comprehensive and transparent data sets from Ta/Nb suppliers.

This poster has three sections. First the historical context is set. Analysis is provided, detailing key drivers of the global-local restructure of the Ta/Nb supply chain (associations, legal/fiscal frameworks, national/regional/commodity focused mining associations). The second section focuses on contemporary Ta/Nb case studies, emphasizing progress towards increasing transparency in the global supply chain (information sources, data availability issues, artisanal mining, and certification mechanisms).

To conclude, complex issues in the Dodd Frank Section 1502 certification process are highlighted. These include: What is the known global proportion of Ta/Nb from conflict or high-risk areas (beyond the African supply)? How effective will geochemical analytical tools be for establishing global flows of Ta/Nb? Will the demand for North American Ta/Nb increase in forthcoming years while the certification process is standardized and the big picture risks of certification (global supply/demand) are worked through? Importantly, Canadian Ta/Nb sources are conflict free, and easily certifiable – detailing output, capacity, ownership and supply contracts.

The findings will be useful to the Ta/Nb industry supply chain (mining, trading, processing, metal fabrication, capacitor manufacturing, recycling). The anticipated outcome of this research will be a critical reflection of how Ta/Nb suppliers' new data requirements will change future geographies of conflict free Ta/Nb demand/supply patterns.

### **Keywords:**

conflict free minerals, Dodd Frank Section 1502, global-local restructure, Ta/Nb industry supply chains

## Navigating Global-Local Landscapes of Scrutiny: Canadian Mining Industry

**van Zijl de Jong, Shona (Laurentian University)**  
**Leybourne, Matthew (Laurentian University)**

The project involves discovering how the Canadian mining industry operates in a landscape of unprecedented scrutiny from regulators, investors, the public and the media. Most prior research on Canadian enterprises has focused on the fact that Canadian enterprises face a number of risks, including environmental, reputational and financial. The goal is to establish that several Canadian mining enterprises proactively manage their reputation, integrating into their business model corporate social responsibility (CSR).

This research draws on Canadian case studies to highlight important lessons for the future of the mining sector. We focus on contemporary Canadian mining crisis case studies and their consequences, emphasizing evolving best practices (engagement plans, accounting and reporting, ethics training, common actions and social license) and regulatory frameworks and corporate governance challenges (i.e., due diligence and risk assessments). We look to the future to highlight that some in the Canadian mining industry are learning from high profile cases and are developing new codes of conduct to strengthen their CSR strategies and policies. This research will provide valuable information regarding geographies of potential benefits of CSR to the Canadian mining sector (triple bottom line, human resources, risk management, brand differentiation, reduced scrutiny, supplier relations) on a national and global scale.

## Advancing Detailed Geospatial Information for Northern Ontario Agricultural Landscapes: Progress in 2013 and 2014

**Vanthof, Vicky (University of Waterloo)**

**Nussli, Emma R (University of Waterloo)**

**Sweeney, Stewart J (Ontario Ministry of Agriculture, Food and Rural Affairs,  
Guelph)**

Detailed geospatial information and analyses of northern Ontario agricultural landscapes are being systematically conducted by the Ontario Ministry of Agriculture, Food and Rural Affairs (OMAFRA). Vanthof and Sweeney (2014) reported on the first comprehensive mobile mapping effort for field-by-field cropping system ground-truth observation collection by the Ministry for sentinel project areas across the northern parts of the Lake Huron, Georgian Bay and Ottawa River watersheds. Those 2013 cropping season results covered 4 study areas: Chelmsford (North Sudbury), West Nipissing (Sturgeon Falls), Powassan and Temiskaming Shores (TS). The 2014 field mapping campaign covered these study areas as well as part of Manitoulin Island. Ontario's Forest Resources Inventory (FRI; OMNRF-LIO, 2008) orthoimagery (40cm multi-spectral) was used as the background for this mapping effort with GPS-enable rugged laptop computers. This paper reports on the 2013 and 2014 field-by-field mapping results and the ground-truth information databases that are being developed for these sentinel agricultural landscape study sites. Armstrong Township (northwest corner ; southeast corner), within the TS study area, was digitized based on the Ontario FRI imagery. This township is the first in this region of the province to be added to the growing Ontario Agricultural Resource Inventory (AgRI; Sweeney et al., 2013) - a seamless digital polygon framework of agricultural and rural landscape features. Foundational work to compile and assess on-farm-generated (OFG) geospatial data sets, that have been collected with high-resolution GPS units on cropping system equipment, has also begun for cropland within the TS study area. Maps and comparative analyses of the 2013 and 2014 project study areas are presented.

### **Keywords:**

**NORTHERN ONTARIO AGRICULTURAL CROPS, MOBILE MAPPING, ARMSTRONG  
TOWNSHIP**

## Community conservation strategies as alternate ways of valuing nature

**Vardhan, Mamta (University of Alberta)**

Market based approaches to conservation have gained prominence to address the problem of environmental degradation in the tropics. As ideas about commodification of nature are put into practice, many scholars have cautioned that the logic of market applied to conservation may fundamentally reshape the ways that humans relate to nature. This paper draws on this critique and presents preliminary evidence from Udaipur, India, of community-based conservation strategies rooted in cosmological beliefs and a relational ideology with respect to nature that may broaden the discourse on valuing nature on monetary basis to include alternate ways to valuing nature.

**Keywords:**

market based conservation, valuing, nature

## Gender and Subsistence Agriculture in Africa: Rethinking Food Security Policy

**Vercillo, Siera (Western University)**

The paper aims to contribute to the literature on food security policy in sub-Saharan Africa, by exploring its relation to gender and development that moves beyond the prevailing understanding of the differential roles that men and women have in agricultural production, marketing, and food preparation. Policy on food insecurity typically has an asymmetrical focus on women's labour in subsistence agriculture, without due attention to other institutional arrangements that can serve to limit their control over farm investments and household consumption. The paper begins by summarizing how feminist scholars have conceptualized gender or social relations, and contrasts these with mainstream food security policy approaches that focus on women in subsistence agriculture. Next, attentions turn to the Gender and Equity Policy designed by the FAO because of its significance shaping rural development agendas. The practical implications of a disjuncture between theory and policy are next examined in relation to a specific food security program in Ghana. The core argument of the paper maintains that if food security policy does not consider the complexity of land tenure regimes - whereby women tend to provide the bulk of the labour and men exert influence over what is produced and how it is distributed, though these relations are negotiated and not fixed - policy will continue to shape inequitable entitlements to food. Understanding land tenure arrangements and how they impact food security policy is a first step to re-orienting interventions in a way that could better meet food security needs.

**Keywords:**

food security, agriculture, gender, West Africa

## The Sacred Canopy & the Disillusionment of the Precariat

**Walker, James Bellamy (Brock University)**

The sacred canopy represents the worldview of a group of people that is shaped by a certain set of commonly held assumptions, which give order and meaning to life. As examined here, the sacred canopy is forged in the American Dream, which has traditionally provided hope and inclusiveness for those members of society who have been most vulnerable. With ideals such as liberty, freedom, justice and equality woven into the founding documents - the American Dream had been a sacred trust upon which society was constructed. People had faith that even if they never saw prosperity in their lifetime, that their children and grandchildren could capture the dream through hard work and perseverance.

What we are seeing in Ferguson, Missouri, and other places throughout North America, is the erosion of the sacred canopy and the disillusionment of the precariat class resulting in protests where the dissenters believe they have nothing left to lose and the authorities view the disobedience as a form of domestic terrorism. The protesters have actuated their position through sustained righteous and moral indignation; however, this is a contestation in part for space and power, but also for dignity and respect. While civility is often viewed as preferable, contemporary dissent appropriates violence within the process of asserting one's voice in reclaiming their humanity, and is a necessary condition to making this claim real and tangible on a stage that will allow for enduring and meaningful change.

**Keywords:**

sacred canopy, precariat, dissent, protest

## Wind energy development and perceived real estate values in Ontario, Canada

**Walker, Chad (Western University)**

**Baxter, Jamie (Western University)**

**Mason, Sarah (Western University)**

**Luginaah, Isaac (Western University)**

**Ouellette, Danielle (Western University)**

This paper focuses on public concerns about real estate value loss in communities surrounding wind turbines. There are conflicting results in the recent academic and “grey” literatures on the issue- but little has been said about how residents near turbines view the value of their own properties. Given the way wind turbine policies are developed and implemented in Ontario, it is important to examine both ‘owners’ who may be benefitting from development, and others living close by but without financial lease payments given to them. Using both face-to-face interview and survey (n=152) results from two adjacent communities, this exploratory mixed-method study contextualizes perceived property value loss. Interview results suggest that there may be a connection between perceived property value loss and actual property value loss, whereby assumed property degradation from turbines may lead to lower asking and selling prices. This idea is reinforced by regression results which suggest that felt property value loss is predicted by health concerns and impacts on daily life. Overall, the findings point to the need for greater attention to micro-level local impacts of wind energy development and a stronger commitment to siting, monitoring and mitigation processes that respect rural areas playing host to turbines. This work suggests that the relationship between felt property value loss and actual sales near turbines needs to be investigated using further mixed methods longitudinal studies.

### **Keywords:**

wind turbines, real estate, energy policy

## "Curious Congruities: Foreignness, Exoticism, and Colonialism in Two Oil Company Advertisements, 1925-2013."

**Wereley, Ian (Carleton University)**

This research engages with two oil company advertisements – British Petroleum’s “A Temple of the Fire Worshippers” (1925), and Cenovus’ “A Different Oil Sands” (2013). Though separated by nearly ninety years, and produced within different geographical settings by two very different companies, a critical deconstruction and comparative analysis of these advertisements reveals that they are remarkably similar. Both employ the same representational methods, narrative strategies, and thematic elements, while advancing similar geographical visions of space, time, and identity.

In particular, this research explores the ways in which both advertisements labour to construct dichotomies of foreign versus domestic, exotic versus civilized, and outmoded versus modern in their scripting of the geospatial dimensions of oil. How, though, could two documents that are at once so radically distant feel so close? My assertion is that the advertisements pursue the same narrative and representational goal – to script the spaces of oil extraction as distant, foreign, exotic, and empty, while at the same time nurturing a sense of technological mastery in the urban viewer in order to justify their colonial impingement upon such spaces. This research, therefore, uses popular geopolitics theory to engage with both historical and contemporary representations of energy, space, identity, and the environment in popular culture. Specifically, it seeks to contribute to broader conversations regarding the spatial legacies of colonialism and the subtle yet often-violent narratives that are presented in the imagined geographies of energy company advertisements.

### **Keywords:**

oil, popular geopolitics, imagined geographies, colonialism

## The Politicisation of Maritime Search and Rescue: Migrant Interdiction and Contested Geographies of the State

**Williams, Keegan (Wilfrid Laurier University)**

International maritime law defines the obligations for masters of ships at sea to render assistance to persons in distress. This practise, though ancient, had no formal structure until the adoption of the International Convention on Maritime Search and Rescue (SAR) in 1979. In effect, the SAR divides the world's oceans in a series of regions over which states have responsibility for search and rescue. These regions typically extend far beyond the territorial waters where states retain full sovereignty. As of 31 August 2014, 105 states representing 83% of the world's shipping by tonnage had adopted the SAR, including Canada, the United States, most of the European Union, and Australia.

As migrant flows increase worldwide and Western states close pathways to legal status, many (but an unknown number of) undocumented migrants have taken to movement at sea. In response, maritime search and rescue has been used as a technique by states, notably the United States, Australia, Italy, Spain, and Canada, to interdict these migrants. In these countries, the publicity, fear of 'invasion', and 'asylum crisis' generated by the 'boat people', most notably after the 2001 MV Tampa Incident, have turned maritime interdiction into a serious political issue. The meanings of 'search and rescue', 'distress', and 'place of safety', in addition to the demarcations of the SAR regions, have thus become politically contested as states compete and cooperate to reconstitute their geographies of the border and the sea. Ordinary search and rescue, then, is now entangled in state creation and management of these exceptional zones of statelessness.

**Keywords:**

migration, maritime law, asylum, borders

## The Politics of Horses

**Wood, Patricia (York University)**

This paper explores how horses have become a politicized object in the Republic of Ireland through the recent intensification of the control of horses, particularly those held by Irish Travellers, a marginalized minority population in Ireland. The question of the control of horses is placed in both broad and narrow contexts, in order to understand why a relatively small-scale, innocuous situation has taken on such urgency and import. The resulting findings indicate important relationships of economics and governance at various scales, from the local to the national to the global (primarily Europe). The contexts in which various players find themselves and the situations which they themselves create, in turn create contexts for other parties. Although certain policies regarding horses are clearly directed towards Travellers, in many ways Travellers are simply caught in the cross-fire of a dramatic transformation of rural Ireland. Travellers, as an already vulnerable population, are generally unable to respond successfully to the State's interference into their property rights and are, furthermore, significantly affected in several negative ways by the loss of their horses--a factor which does not appear to hold any weight with other parties.

**Keywords:**

Irish Travellers, rural development, citizenship

## "They could take you out for coffee and call it consultation!": Aboriginal Communities' Role Decision-Making in Jasper National Park

**Youdelis, Megan (York University)**

Canada is a country noted for its relatively progressive co-management arrangements in recently established national parks (Goetze, 2005; Mulrennan and Scott, 2005), however it continues to struggle with the legacy of colonial exclusion of aboriginal peoples in its older and more iconic parks. The three original aboriginal families living in the Jasper National Park area were evicted with its establishment in 1907. Several other aboriginal communities in the area also claim to have important sites and traditional territory in and around the park and have thus been incorporated in to the recently formed Jasper Aboriginal Forum, created in 2006 in an attempt to re-integrate aboriginal communities into the park and improve aboriginal engagement and involvement in park planning and decision-making. This research asks what Jasper National Park is doing to meet its duty to consult and to repair past offenses and how this is being received by different aboriginal communities who have interests in the park. I take a focus on aboriginal community members' perceptions of aboriginal consultation processes in two recent controversial private development projects within the park, the Glacier Skywalk and the Maligne Tours hotel proposal. Despite park managers' well-meaning attempts at reconciliation and developing aboriginal consultation, various members of the Forum feel that the process is ineffective and does not meet their expectations for consultation, nor does the form of consultation they receive respect their Treaty rights or the Supreme Court decisions of Mikisew Cree, Haida and Taku River. Given that Parks Canada prides itself in being a "leading federal organization when it comes to working with the Aboriginal peoples of Canada" (Parks Canada, 2011), an exploration of aboriginal communities' satisfaction with consultation practices in Canada's older parks is critical to evaluating their effectiveness and to improving park-aboriginal relations across Canada.

**Keywords:**

Conservation; Political Ecology; Indigenous People; Canada

## Courtyard Housing for Health and Happiness: Architectural Multiculturalism in North America

**Zhang, Donia (York University)**

Health and happiness are fundamental to human quality of life. The United Nations' World Happiness Report 2012 reflects a new worldwide call for governments to include happiness as a criterion to their policies. The 'Healthy Cities' or 'Happy Cities' movement has been endorsed by the WHO since 1986, and a 'Healthy House' or 'Happy Home' is a critical constituent of a healthy city or a happy city. Nevertheless, the concept has not been fully explored. Existing literature on the healthy house has often focused on the technical, economic, environmental, or biochemical aspects, while current scholarship on the happy home commonly centers on interior decoration. Few studies have addressed the importance of social and cultural factors that affect the health and happiness of the occupants. Identifying four key themes in Chinese philosophy to promote health and happiness at home, this paper links architecture with Chinese philosophy, social sciences and the humanities, and in doing so, argues that Architectural Multiculturalism is a vital ideology to guide housing design in North America. Using both qualitative and quantitative evidence gathered from ethnic Chinese and non-Chinese living in the USA and Canada, the study proposes that the Courtyard is a central component to promote social and cultural health and happiness of residents.

**Keywords:**

Courtyard housing, health, happiness, Architectural Multiculturalism



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