

# Building on Strength



## REPORT OF THE TASK FORCE ON SUSTAINABILITY RESEARCH

2016

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# REPORT OF THE TASK FORCE ON SUSTAINABILITY RESEARCH 2016

## I. INTRODUCTION

Sustainability is a prominent research focus at York University (henceforth York), pursued across all Faculties. For example, the Faculty of Environmental Studies (FES) was created in 1968 as Canada's first environment-focused university Faculty. Over the past 20 years, two Organized Research Units have been dedicated to sustainability research, including the FES-based York Centre for Applied Sustainability (YCAS) and the University-wide Institute for Research and Innovation in Sustainability (IRIS). In addition, several Faculty-based research centres focus on the environmental dimensions of sustainability and some university-wide ORUs devote significant research, publishing and outreach to sustainability, such as the Robarts Centre for Canadian Studies and The City Institute. York's sustainability researchers work with colleagues worldwide. The growing interest in sustainability research in the natural, physical and social sciences, as well as the humanities and fine arts, is demonstrated by the emergence of sizeable interdisciplinary clusters that receive funding from Tri-Council grants, Ontario programmes and other external organisations. York also supports a great deal of undergraduate and graduate student research in sustainability illustrating the synergy between sustainability research and teaching, with sustainability themes evident in the course offerings of most Faculties.

### 1. Formation of the Task Force

The York University 2014-16 Task Force on Sustainability Research (henceforth Task Force) was announced on 23 April 2014 as an initiative sponsored by the Office of the Vice President Research and Innovation (VPRI). The Task Force was created to evaluate current and emergent research strengths in the area of sustainability and to recommend structures to support, integrate, cultivate and publicize York's sustainability research.

The mandate of the Task Force was to:

- Engage broadly the community to identify current and potential sustainability research strengths at York;
- Develop recommendations for structures that best capture York's strengths in sustainability research and promote and foster York's future;
- Provide advice on potential linkages between researchers at York and external partners; and
- Provide a final report to the York community that reflects the Task Force's findings and recommendations.

A central feature of sustainability research at York is environmental responsibility; this conception supports the thematic area of "Public Engagement for a Just and Sustainable World," which is one of the strategic areas identified for development in Building on Our Strengths: York University's Strategic Research Plan 2013-2018.

### 2. Task Force Membership

A call for nominations for Task Force membership was released on 20 August 2014. Over 30 candidates were proposed through a combination of self-nomination, peer-nomination and nominations by Associate Deans Research. Although a target of 10 to 12 members was stated in the Call for Nominations, 15 candidates were selected from diverse disciplines and Faculties. In the fall of 2015 two new members joined the Task Force to replace members who had to leave the Task Force. These Task Force members include scholars with a broad range of methodological approaches, research goals and levels of research experience.

**The 2014-2015 Sustainability Task Force members are:**

**Teresa Abbruzzese**

Assistant Professor,  
Department of Urban Studies, LA&PS

**Richard Bello**

Associate Professor, Geography, LA&PS and  
Chair, York University Advisory Committee on Northern  
Studies  
Coordinator, Environmental Science Program

**Kean Birch**

Associate Professor,  
Business and Society Program, LA&PS

**Jennifer Foster** (Chair of Task Force)

Associate Professor  
Coordinator, Planning Program  
Coordinator, Urban Ecologies  
Faculty of Environmental Studies

**Atifa Karim**

Alumni, York University

**Sushanta Mitra**<sup>1</sup>

Professor and Chair of Mechanical Engineering, Lassonde  
School of Engineering and  
Kaneff Professor in Micro and Nanotechnology for Social  
Innovation

**Joanna Robinson**

Assistant Professor,  
Department of Sociology, Glendon College

**Chandra Sharma**

Watershed Specialist, Etobicoke-Mimico and Senior Man-  
ager, Climate Programs  
Toronto and Region Conservation Authority

**Christopher Ardern**

Associate Professor, School of Kinesiology and Health  
Science  
Research Scientist, Southlake Regional Health Centre

**Christopher Bentley**

Ph.D. Candidate, Faculty of Education and  
Chair, President's Sustainability Council Student Sub-Com-  
mittee

**Ravi De Costa**<sup>2</sup>

Associate Dean Research,  
Associate Professor,  
Faculty of Environmental Studies

**Ian Garrett**

Assistant Professor, Department of Theatre,  
Faculty of Fine Arts

**Carla Lipsig-Mummé**

Professor, Work and Labour Studies, LA&PS;  
Director, Work in a Warming World (SSHRC CURA); and  
Director, Adapting Canadian Work and Workplaces to Re-  
spond to Climate Change (SSHRC Partnership)

**Roberto Quinlan**<sup>2</sup>

Associate Professor,  
Department of Biology,  
Faculty of Science

**Catriona Sandilands**<sup>1</sup>

Professor, Faculty of Environmental Studies and  
Former Canada Research Chair in Sustainability and  
Culture

**Sapna Sharma**<sup>1</sup>

Assistant Professor, Department of Biology,  
Faculty of Science

**Barbara Edwards** served as the Executive Support from the Office of the VPRI.

<sup>1</sup> September 2014 to August 2015

<sup>2</sup> September 2014 to December 2015

### 3. Vision for Sustainability Research

The Task Force developed a vision statement for sustainability research that reflects York's unique history, interdisciplinarity and mandate. This vision statement was developed to help understand how sustainability research is currently constituted at York and to help guide the overall direction of sustainability research in the future. The vision is intended as both a projective and practical means of approaching sustainability research, something that can help identify not only the distinct character of existing research but also possibilities for future research.

*“Our vision is that sustainability research generates knowledge that integrates the social, cultural, economic and environmental dimensions of complex challenges at scales ranging from local to global. This interdisciplinary approach emphasizes creativity and collaboration in order to advance research, action and innovation in social, economic and environmental justice.”*

## II. ORGANIZATIONAL APPROACH OF THE TASK FORCE

### 1. Meetings and communication

The Task Force met thirteen times between September 2014 and December 2015. Meetings were conducted in person, with some members participating via remote means such as teleconference and webcast. The Task Force also maintains a website at: <http://taskforce.info.yorku.ca>, which communicates basic information about the mandate, announcements, membership and reports, as well as an electronic portal for public input.

### 2. Preparing the Report

The Task Force engaged in a two-phase consultative process.

#### Phase 1

Phase 1 was conducted from September 2014 to February 2015. It included presentations to and consultations with: Faculty Councils; the Council of Research Directors; the President's Sustainability Council; the Senate's Academic Policy, Planning and Research Committee; Deans; and Associate Deans Research.

The meetings during Phase 1 had five objectives:

- Introduce the Task Force and its work;
- Solicit early input to the Task Force's work;
- Build awareness of the ongoing work;
- Engage with York members on their sustainability research perspectives; and
- Prepare the York community to participate in Phase 2.

Since September 2014, an online portal was also accessible to York members who wished to convey their input electronically.

## Phase 2

Phase 2 of the consultative process began two weeks after the Task Force's draft report was released in April 2015. The same groups consulted during Phase 1 were revisited in order to obtain feedback on the draft report. Phase 2 also included meetings and discussions with student groups, three forums where York community members could contribute their input, and online surveys for all York community members as well as external partners. In addition, the draft report was circulated to a range of external partners who were consulted for feedback.

The consultation during Phase 2 had five objectives:

- Gather feedback on the draft report;
- Request edits (additions or deletions of members and descriptions) to the internal inventory;
- Solicit recommendations from York's internal and external community for future directions in sustainability research;
- Integrate community input into the final version of the Task Force report; and
- Prepare the Task Force's final report for submission to the York community.

### 3. The Working Groups

Two working groups were organized to conduct an inventory of current sustainability research and external partnerships. The first working group sought to identify York's current sustainability research and researchers across all Faculties. The second working group conducted a scan of present external partnerships and potential partners for the future. Selected external stakeholders were approached for feedback.

The Internal Inventory Working Group was composed of T. Abbruzzese, K. Birch, J. Foster, and S. Mitra. The External Scan Working Group for Current and Potential Partnerships was composed of R. Bello, C. Sandilands, C. Sharma, and S. Sharma.

In the process of carrying out their work, the Task Force members gained significant additional knowledge about the history, funding and growing influence of sustainability research at York. This information provided the context for our recommendations in this Report. A larger picture emerged in two specific areas: (a) the background and structures of sustainability research, and (b) recent growth.

## III. SUSTAINABILITY RESEARCH AND PARTNERSHIPS AT YORK

### 1. York University's Internal Inventory

In order to develop a coherent sense of the range and character of sustainability research at York, the Task Force assembled an inventory of Faculty members and graduate students. This process involved an on-line review of all faculty profiles in relation to the vision of sustainability developed by the Task Force, as well as consultation with the Faculty of Graduate Studies. A preliminary inventory was circulated to all Associate Deans Research for further suggestions. The inventory is attached to this report as Appendix 2. As part of the Phase 2 consultative process, we also welcomed recommendations from the broader York community for additional names and research areas of faculty and others who are conducting sustainability research.

The internal inventory of sustainability research can be updated on a regular basis and reflects the rich diversity of sustainability research across York. Limitations to developing the inventory included limited access to information about student research in sustainability, incomplete or outdated faculty profiles, and scarce information about research conducted by contract faculty. Despite these limitations, the inventory identified nearly 300 York researchers as undertaking sustainability research. Sustainability research at York is distinctly inter-

disciplinary and reflects collaborations that generate knowledge and advance solutions for current problems.

The Task Force identified a number of significant theme areas in sustainability research across different Faculties and disciplinary approaches. A sample of prominent themes includes (alphabetically):

- Alternative energy systems
- Arts-based sustainability initiatives
- Business and sustainability
- Climate policy
- Community-based initiatives for low-carbon transition
- Ecological economics
- Ecological ethics and philosophies
- Ecology and environmental science
- Environmental humanities
- Environmental justice
- Environmental law
- Green management
- Human-animal studies
- Northern communities
- Social strategies for responding to climate change
- Urban sustainability
- Work and climate change

We defined a theme as significant if it has a combination of the following attributes:

- It had an identifiable group of researchers who currently work together;
- It comprised members of an ORU or major research program;
- It may have involved community initiatives over a period of time; and/or
- It involved researchers from two or more Faculties who may have received or are applying for external funding, may have received external (disciplinary, national, international) recognition, and may link their research to teaching, research training, or experiential learning.

The researchers that work in these theme areas generate new knowledge on sustainability, generate funding for research, attract new sustainability scholars and community partners and contribute to education and training.

## **2. External Scan of Sustainability Partnerships and Funding Opportunities**

The external scan had two key objectives. The first was to identify innovative sustainability research at York University, including how it is coordinated and implemented. In consultation with Faculty Research Officers, the working group contacted researchers at York University who have used innovative and collaborative approaches to highlight key examples of sustainability research and partnerships (selected profiles are included in this report). The second objective was to conduct a scan of external granting agencies and funding opportunities available at the local, regional, provincial, national and international scales. While the working group was not able to achieve an all-encompassing scan, the goal was to provide guidance on potential opportunities for funding and partnerships. A list of potential external funding opportunities is provided in Appendix 3.

## IV. RECOMMENDATIONS

The following recommendations are proposed as means to promote and foster York's research strengths in the area of sustainability. The recommendations are organized into themes that reflect connections, communication strategies and funding. The recommendations are presented as initiatives and actions that could be implemented over the short term (12 months), medium term (1 to 3 years) and longer term (3+ years).

### **Connection:**

#### Short-term

- i. Develop a comprehensive inventory of sustainability research at York that will be updated regularly and available to York members.
- ii. Conduct analysis of York's sustainability research strengths to identify four to six broad areas where York researchers are conducting innovative, high impact, collaborative research.
- iii. Establish a York-wide Sustainability Hub focusing on environment and sustainability. The Sustainability Hub will support four to six research nodes that reflect the range of York's disciplinary and interdisciplinary strengths, including exploratory and problem-oriented research as well as areas in which York's research on sustainability is expanding. These nodes will be the sub-units of the Hub's structure and governance.
- iv. Building on existing outreach, coordinate high-level consultation sessions with York's external partners to identify the full range of possibilities and strategies for enhancing research collaboration.

#### Medium-term

- v. Dedicate physical space to the Sustainability Hub for collaborative research purposes and social interaction, including student space.
- vi. Emphasize York's strengths in the area of internationalization to connect to global issues.
- vii. Connect York sustainability research with universities and centres of excellence for sustainability research globally, including establishing an international York campus.
- viii. Foster private, public and not-for-profit collaborations to advance sustainability research.
- ix. Team with York's immediate community to build strategies for justice and sustainability.

#### Long-term

- x. Launch York University Press as a publishing, distribution and retail press with a specialty focus on sustainability research, including at least one refereed journal.
- xi. Establish an online, open access sustainability journal that is internationally peer reviewed.

### **Communication:**

#### Short-term

- xii. Develop an ongoing communications strategy that profiles sustainability research and events at York, including through social media, workshops, brown bag talks, etc.
- xiii. Create an electronic portal that profiles York's strengths in sustainability research.

#### Medium-term

- xiv. Host an annual international interdisciplinary sustainability research conference that stimulates debates and discussions related to York's vision of sustainability research and connects scholars at York with broader communities at local, regional, national and global scales.
- xv. Cultivate media partnerships to promote York sustainability research and dialogue.

**Funding:**

Short-term

- xvi. Ensure funding support for the Sustainability Hub, including logistical, capital, and ongoing support.

Medium-term

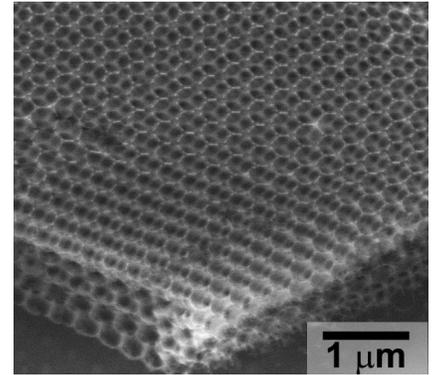
- xvii. Prioritize central funding support for sustainability research at York through the creation of a sustainability fund that provides seed funding or matching funds for both exploratory and applied sustainability research at York.
- xviii. If it is necessary to host the Sustainability Hub within an identified Faculty, the Faculty of Environmental Studies is the most suitable host due to its interdisciplinary nature and commitment to sustainability research.
- xix. Establish Research Chairs in Environment and Sustainability.
- xx. Create mechanisms to attract top graduate students and Post-Doctoral Fellows focusing on sustainability, including scholarships.
- xxi. Establish an endowment fund for a lecture series in sustainability, similar to the Massey Lecture Series.

## APPENDIX 1: Profiles of Sustainability Research

### Jennifer Chen Research Group:

#### *Nanophotonics and materials for solar energy and biosensing applications*

Research on solar energy and biosensing in the Chen group explores the optical effects of nanomaterials for boosting the absorption of materials currently used in solar cells. This is interdisciplinary research that incorporates photonic crystals, which are ordered structures, to localize light onto the material of the crystal (a scanning electron micrograph of the structure is shown below). Through this process, photons can be more easily harvested and the amount of charge generated by a photovoltaic cell can be increased. The research aims to contribute to the advancement of low-cost organic solar cells that may be important for achieving a sustainable future using renewable energy.



Nanomaterials can exhibit rare properties that bridge molecules and bulk, creating a unique relationship between chemistry and engineering. The development of new nanomaterials can provide unparalleled opportunities for advancing various technologies that can lead to improved human health and a more sustainable environment. The research conducted in this interdisciplinary group encompasses materials chemistry, physical characterizations and device engineering, with the overall goal of synthesizing and assembling nanomaterials into 3D and 2D structures via a combination of bottom-up approach and top-down approaches.

### Janine Marchessault, Jennifer Foster and Chloe Brushwood Rose

#### *Land|Slide: Possible Futures*

Land|Slide: Possible Futures was a groundbreaking large-scale site-specific art exhibition that focused on the relationship between sustainability and urbanization in a rapidly evolving locale. The three-year project culminated in over 30 installations by national and international artists, where the grounds of the 25-acre open-air Marham museum were reinterpreted through a critical and exploratory lens.

The exhibition probed questions around how histories are inscribed, how spaces are inhabited, and what sustainability means in a complex socioenvironmental landscape like Markham's. The Markham Museum offers rich terrain for such exploration, with its explicit staging of colonial pre-occupations as assumed common heritage. Land|Slide" Possible Futures brought together artists, ecologists, urban planners, educators, civic leaders and the general public. The diverse installations deployed new historical interpretations to build new futures for the use and inhabitation of land.



## Susan D. Dion

### *the inVISIBILITY project*

ES, DIGITAL STORYTELLING

A KNOWLEDGE MOBILIZATION PROJECT BY DR. SUSAN D. DION, DR. CARLA RICE, DR. ANNA HUDSON, TANYA SENK & HANNA FOWLIE



In Canadian cities, Indigenous communities are often rendered invisible; dominant representations of us made by others create expectations and many First Nations, Métis and Inuit people move unrecognized through urban spaces. Recently, in response to the amplification of Indigenous voices demanding recognition, Canadians are simultaneously confronting their desire to know and the depth of their own ignorance. In many ways, fear and the discomfort of not knowing maintains a barrier between us, a barrier further reinforced by the seemingly impossible task of acknowledging a colonial history and consideration of how that history positions us differently in relationship to the state, the land, and each other.

With a specific pedagogical purpose *inVISIBILITY: Indigenous in the City* was a two-phase outreach knowledge mobilization project bridging the gap between stakeholders in Education, and Indigenous Communities. Phase One involved a digital storytelling workshop for Indigenous students, parents, and teachers to explore and represent their experiences of being urban and being in school; Phase Two was a three-week art exhibition and speaker series at the John B. Aird Gallery in Toronto. Drawing on knowledge, understanding, and insights gained from an investigation of Aboriginal Education in Toronto schools<sup>1</sup> the goal of *inVISIBILITY* was to create an Indigenized space within the gallery where artists, scholars, film makers, teachers, students, and parents creatively shared their experiences and perspectives with each other, with stakeholders in education, and the broader community. Representing the experiences and perspectives of urban Indigenous communities through art allowed for complex representations of people's lived experiences that supported learning in relationship. Through their work, Indigenous artists simultaneously clarified and complicated stories of schooling, resulting in an exhibition that called on stakeholders in education and the public to think and respond.

<sup>1</sup> Dion, Susan D.; Johnston, Krista; Rice, Carla, M (2010) *Decolonizing Our Schools Aboriginal Education in the Toronto District School Board*. (Toronto)

## William Colgan

### *Glaciers and climate modeling in the Arctic*

This research focuses on interactions between climate and glaciers, in particular the past and future sea level rise contributions of the Greenland ice sheet. The Greenland ice sheet is currently losing about 8000 tonnes of ice per second, around the clock, 365 days a year. This project uses satellite gravity observations to monitor the magnitude and spatial distribution of this ice loss, as this unprecedented rate of ice loss is rapidly reshaping the Earth's gravity field in readily observable ways.

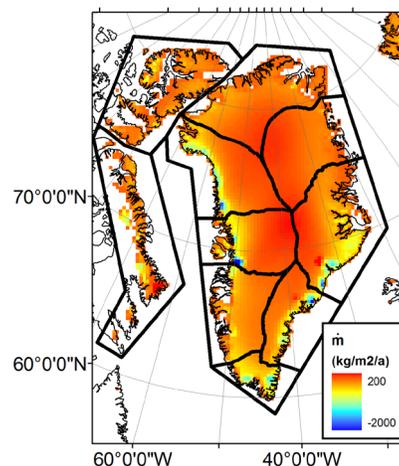
The research also incorporates field observations that are used to identify and measure the physical processes behind the past decade of ice loss. Understanding these processes allows simulation of these processes with computer models to project the next century of ice loss. While most people undoubtedly feel removed from the Greenland ice sheet, the stark societal implications of sea level rise are making glaciology research highly topical. A study published about this research in *Nature Climate Change* (January 2016) documents recent changes in the near-surface layers of the ice sheet that now cause meltwater to runoff to the ocean more rapidly than previously, and was disseminated by over 100 media outlets. By virtue of the intense resources required to monitor glacier globally, glaciology research has become highly international.

This research is funded by the European Space Agency with Danish collaborators, and the recent field research is NASA-funded with American collaborators. Unfortunately, many aspects of glacier research, especially field campaigns supported by charter military aircraft or higher performance computing activities powered by fossil fuels, are carbon intensive, and parallel work calculates the carbon footprint associated with these activities, in order to actively minimizing the carbon intensity of climate change research in favour of new technologies such as electric snowmobiles and green data centers.

## Sapna Sharma

### *Are lakes warming around the globe?*

Sapna Sharma, Assistant Professor in the Department of Biology, is on the steering committee and is the lead author of two studies published by the Global Lake Temperature Collaboration (GLTC). The GLTC is an international, inter-disciplinary collaboration consisting of over 80 scientists from over 20 countries interested in understanding how lake water temperatures are changing worldwide in response to climatic conditions. This project published a database summarizing water temperature and climatic conditions in 291 lakes across 6 continents using a combination of satellite-based measures collected by NASA and lake specific measurements collected by thousands of scientists over the past 25 years. The total volume of water in these lakes represents more than half of the world's freshwater. The project found that lakes around the world are warming faster than both oceans and air temperature. In fact, Canadian lakes are warming twice as fast as air temperatures, which can have profound effects on lake water quality, favoring increases in algal blooms and depletion of oxygen. Algal blooms can be toxic to fish and animals, result in less potable water for human use, and contribute to loss of recreational activities, including beach closures. In addition, even though lakes in warmer regions are not experiencing temperature changes as extreme as seen in northern lakes, their rates of temperature increase are already reducing fish productivity and food supply in the African Great Lakes. The global assessment of lakes produced through this research shows increases in water temperatures over the past 25 years for over 90% of the ~300 lakes studied. The results of this work demonstrate that it is imperative to include climate impacts in assessments of global freshwaters to ensure that they reflect the diverse environmental and anthropogenic stressors that could threaten the sustainability of global supplies of food and fresh water.



*Assessing the spatial pattern of recent ice loss: Change in ice mass per unit area across the Canadian Arctic and Greenland, 2003-2009*

## Felipe Montoya

### *Las Nubes Project, Costa Rica*

**L**as Nubes is a permanent project focusing on interdisciplinary, participatory, action-oriented environmental research, education and community engagement located primarily in the Alexander Skutch Biological Corridor (ASBC) of southern Costa Rica. The project has maintained working relationships with the largest public universities of Costa Rica, independent research institutes, and regional and community organizations, among others. Our aim is to contribute to improved social and environmental wellbeing.



*Creating digital capacities.*



*Las Nubes Forest Reserve.*

During the last three years the project has supported numerous graduate student research initiatives, including research on peasant identity and rootedness, agricultural production and gender, art and social movements, sustainable community tourism, environmental impacts of proposed large-scale infrastructure projects, among others. In an effort to contribute to knowledge mobilization Dr. Bunch and Dr. Montoya of FES, in collaboration with the University of Costa Rica, executed an IDRC-funded project to develop digital capacities among the community members and a web-based clearinghouse of information about the ASBC. An output of this project, in collaboration with Scott Library, has been the establishment of a local library and digital resource center in the ASBC.

Las Nubes has had an ongoing relationship with Point Loma University in California monitoring mammals in the ASBC. A completed bird monitoring project has resulted in the publication of a bird guide of the ASBC featuring close to 300 bird species found locally. The ASBC Council has developed a strategic plan that includes the need for monitoring the social-environmental sustainability of the ASBC. To contribute to this, Las Nubes is currently working on a large, multiple stakeholder five year research proposal to develop locally relevant indicators of social wellbeing along



*Local Library and Resource Centre.*

with biophysical indicators of environmental health.



*Lillian Meighan Wright Centre.*

For 2017 Las Nubes is working on expanding the Summer Field courses in Costa Rica to a Semester Abroad located mainly on what has been consolidated in the last year as York's Eco-Campus, where we are also about to finish the construction of the Lillian Meighan Wright Center for research, education and community engagement.

## Shubhra Gururani

### *Suburbanization in India, A City in Making: The Paradox of Sustainability in India's Urbanizing Frontiers*

Over the last few decades, urban expansion in South Asia has spilled over to its metropolitan fringes. Since the liberalization of the economy in the early nineties, the regimes of land, nature, livelihood, work, and capital have undergone radical transformation and the urban edges of metropolitan cities like New Delhi, Mumbai, Bangalore that mark the nebulous spaces between rural and urban, spaces that are yet to become urban, have become prime destinations for foreign investments, construction booms, housing, and enclave urbanization.



Against this backdrop, this ongoing ethnographic and archival research focuses on the India's Millennium city, the city of Gurgaon located in the outskirts of India's capital, New Delhi, and tracks the competing processes of capitalist accumulation and displacement, agrarian transformation, and property-making. By tracing the colonial and postcolonial histories of land acquisition and conversion and examining the processes of how land and with it nature come to be commodified at different social-political conjunctures, this research shows how in this current moment, the boundaries of the country and the city, of nature and society, inside and outside, public and private are once again being re-constituted. More specifically, the research charts the social-natural processes through which agrarian and pastoral lands become real estate and

show how relations of property in land change, how nature comes to be commodified, and how new registers of values are produced in this rapidly urbanizing frontier.

Acknowledging that the current context of hegemonic neoliberal social ordering in which dissent and conflict have been foreclosed marks a postpolitical condition this research argues that it is not only urgent to scrutinize, describe, and contest the everyday practices through which land/nature are deployed in mapping uneven geographies of property, community, belonging, exclusion and citizenship but it is also necessary to revitalize the political possibilities embedded in the concept of sustainability and carve out new trajectories of urban social-natures, of urban commoning, and social justice.

## Michaela Hynie

### *Living with Climate Change: Mapping Experience and Adaptation in the Global South and North*

Living with Climate Change (LCC) is a SSHRC Partnership Development Grant funded from 2013 to 2015. LCC is a network of research programs studying environmental changes in low (Nepal), middle (India) and high income (Canada) countries in order to link the lived experience of community members with policy responses, locally, nationally and internationally. Results of research into the impact of environmental change across sites surfaced several common issues in terms of drivers of change, adaptation strategies, and approaches to commons. One factor that has been of interest is that of unplanned forced migration. Temporary migration as a strategy to cope with environmental change emerged as a major issue in all sites. The patterns and drivers of forced environmental displacement, and its impact on communities left behind, is one of the topics being pursued in the next wave of research.

## Sean Kheraj

### *Nature's Past: Canadian Environmental History Podcast*

First established in 2008, Nature's Past: Canadian Environmental History Podcast is a quarterly audio podcast about environmental history research in Canada. Through interviews, round-table discussions, and lectures, Nature's Past disseminates the work of Canada's leading researchers in the field of environmental history to both scholarly and popular audiences. It is the longest-running digital environmental history project in Canada. For the past four years, the podcast has been produced at York University with support from the Network in Canadian History and Environment (NiCHE). Sean Kheraj, an Associate Professor in the Department of History, created and continues to lead this project as host and producer.



Over the course of fifty episodes, the podcast has covered a wide range of topics in environmental history, including conservation, energy consumption, wildlife, urban environments, agri-food systems, tar sands development, environmentalism, e-waste, global warming, and much more. This podcast reaches a wide audience with more than 250 subscribers and 55,000 downloads. Its audience includes scholarly researchers and non-academic listeners from around the world. Educators at both the secondary and post-secondary levels have integrated episodes into their teaching as supplementary resources.

In 2012, the Social Sciences and Humanities Research Council of Canada awarded Nature's Past a Public Outreach Grant to support the production of a special mini-series called "Histories of Canadian Environmental Issues". Graduate student research assistants worked alongside Professor Kheraj to produce eight special episodes focused on key contemporary Canadian environmental issues. These episodes were co-published by NiCHE and Canada's History magazine.

## Joanna Robinson

### *Transitioning to a Green Economy*

This research focuses on the human dimensions of environmental change. This research builds off of two completed projects: 1) work published in *Contested Water: The Struggle Against Water Privatization* in the United States and Canada (MIT Press 2013) that examines mobilization to protect water resources and highlights the connection between global policy transformations and the development and outcomes of cross-movement coalitions at the local level, including environmental and labour movements; and 2) a cross-national comparative project, entitled *Building a Green Economy: Environmental-Labor Coalitions in the United States and Canada*, which examines the role of environmental-labour coalitions in creating opportunities to promote green jobs and shape climate change policies in California and British Columbia. Based on in-depth interviews with 58 environmental and labour movement leaders and policy makers, the findings illuminate how the emerging threats of climate change and increasing inequality potentially provide new opportunities for these movements to form long-term sustainable coalitions and impact environmental and labour policies. *Working a Green Job: Workforce Development and the Experience of Workers in the Transition to a Low-Carbon Economy* is a new project that examines the transition to a green economy in Ontario. Funded by a three year SSHRC Partnership Development Grant, the research brings together leading scholars, policy makers and organizations working on issues of environmental policy, labour, inequality and climate change to examine the changing world of work in traditional carbon-intensive sectors. The objective is to examine how this transition affects workers in the auto-manufacturing sector and the potential for investments in a bio-economy to create thousands of living-wage jobs while also serving to reduce greenhouse gas emissions. The research findings will have the potential to shape policies on green workforce development and investment in the green economy in Ontario.

## APPENDIX 2: Inventory of Sustainability Researchers

### Faculty of Environmental Studies

Harris Ali

hali@yorku.ca

- environment and health; environmental sociology; disaster management

Erika Batdorf

ebatdorf@yorku.ca

- Member of 9Dragonheads, International EcoArt Collective

Martin Bunch

bunchmj@yorku.ca

- ecosystem approaches to problem solving, adaptive management; systems thinking; ecohealth

Mora Campbell

moracamp@yorku.ca

- environmental ethics & philosophy, phenomenological & narrative methods; time and environmental thought

Ravi de Costa

rdc@yorku.ca

- indigenous politics, policy, reconciliation, rights, conflict & alliances; environmentalist/Indigenous conflicts & alliances

Jose Etcheverry

rejose@yorku.ca

- climate change mitigation, renewable energy, new media & communications

Leesa Fawcett

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- animal studies, environmental ed., environmental justice, biological conservation, food

Sarah Flicker

sarflick@yorku.ca

- community development; environment and health

Honor Ford-Smith

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- community & environmental arts and education

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- urban environmental justice, novel ecologies, planning discourse

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- ecology, wildlife management, protected areas, extractive industries

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- immigration, multiculturalism, citizenship, environmental politics,

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- environmental justice, bio-politics

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- community energy planning, decisions, sustainable energy systems, climate change, policy

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- social/environmental movements, critical development studies

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- suburbanism, urban political ecology, urban governance, urban infrastructures

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- urban politics & planning; colonization, racialization & sub/ex/ urbanization; red-green strategies

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- global cities, urban/suburbanism, planning

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- intercultural views on climate change; ecological worldviews; environmental education

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- political economy of built environment; planning; suburbanism

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- SSHRC funded interactive web documentary OFFSHORE <http://offshore-interactive.com/site/>

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- food systems & policy; pesticides; localized food and agriculture

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- Sustainable Staging and Arts Production

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- management tools/models for acidification, carbon processing & eutrophication

Phillip Montoya  
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- critical development studies; environmental conservation; rural/peasant studies; Latin America

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- environmental assessment; scenario development; environmental & sustainability thought

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- trade & environment; ecological economics; community economic development; poverty, debt & environmental degradation

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- landscape ecology; urban wildlife ecology; forest fires; GIS

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- planning history and education; affordable housing; social sustainability; diversity, equity & justice

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- conservation and development; social theory and environmental crisis

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- law, science and technology policy standards

Anders Sandberg  
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- science and planning; gentrification of conservation; climate/ environmental justice; sustainability & social democracy; urban forestry

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- environmental cultural studies; environmental writing; sexuality, gender & environmental; queer ecologies

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- Environmental Justice; gender & environmental health

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- indigenous/settler alliances; food justice

Noël Sturgeon  
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- representation of nature and environmentalism in popular culture; feminist environmental justice; social movements

Laura Taylor  
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- nature politics in planning; exurban and suburban studies; cultural landscape studies

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- agrarian relations & food security; African women and development; displacement; migration

Greg Thiemann  
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- arctic ecosystems; food web ecology; wildlife conservation; resource management

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- environmental ethics; environmental policy; sustainability

Peter Victor  
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- ecological economics; environmental policy; sustainability

Traci Warkentin

- environmental education, phenomenology and urban wildlife

Paul Wilkinson  
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- resource & environmental management; tourism planning & man; protected area management

Mark Winfield  
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- environmental policy; environmental law; sustainable energy; urban sustainability; climate change policy

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- critical development studies; geopolitics of oil industry;

## POSTDOCTORAL FELLOWS

Ella Soper-Jones  
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- human-animal studies; eco-criticism; environmental literature;

## EMERITUS

Deb Barndt  
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- agri-food sustainability; food movements; popular education for social & environmental justice; community arts

David Bell  
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- governance and sustainability, transformation in decision-making practices, policies, institutions and culture to support sustainability in the public and private sectors

Gene Desfor  
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- waterfronts; urban development processes; environmental policy;

Bryn Green-Wootten

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- resource man & policy analysis; epistemology in environmental sustainability; waste man; folk narratives on environment

Famida Handy

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- non-profit sector & environmental organizations; environmental economics; environmental non-profit organizations

Bonnie kettel

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- gender, environment & development

Alex Murray

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- design & redesign of work environment; environment & behaviour; food

Becky Peterson

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- feminist perspectives on health & environment

Joni Seager

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- feminist environmentalism & geography; international environmental policy

Ted Spence

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- land use & transportation planning; resource management; environmental policy & planning; international development

Gerda Wekerle

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- growth, urbanization, sprawl & nature; urban agriculture

Peter Penz

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- refugees and migration; environmental displacement

## Ph.D STUDENTS

Sally Morgan

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- MES from York, Earning PhD in Dance, Environmental/Place-Based Educator

Aidan Dahlin Nolan

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- performance as a mode and object of literacy education as well as desire to investigate possible “points of contact” between performance and environmental education.

## LASSONDE SCHOOL OF ENGINEERING

### CIVIL ENGINEERING

Rashid Bashir

- Effect of Climate Change on Geotechnical Design; Mine Waste Management & Soil Cover Design

Ryley Beddoe

- Interaction and influence between climate change and landslide risk

Ahmed Eldyasti

- Waste-to-Energy (WtoE) processes; Greenhouse Gases (GHGs) emissions from wastewater treatment processes

Magdalena Krol

- Innovative groundwater remediation technologies; Green roof design

Jit Sharma

- Sustainable geotechnics

### MECHANICAL ENGINEERING

Sunny Leung

<http://m3.apps01.yorku.ca/>

- sustainable energy

Sushanta Mitra

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- Integrated water management; Water quality; Fuel Cells

### EARTH & SPACE SCIENCE ENGINEERING

Costas Armenakis

- innovative geospatial applications to address emerging issues and knowledge-based decision making,

Mark Gordon

- Environmental air borne pollutant monitoring

Christian Haas

<http://www.ualberta.ca/~chaas/>

- Arctic climate system and ecosystem

Mary-Ann Jenkins

- carbon auditing

Tom McElroy

<http://larss.science.yorku.ca/>

- ozone and climate science as well as air pollution research

John E. Moores

- estimates of the methane content of the martian atmosphere from exogenous sources

Peter Taylor

<http://lassonde.yorku.ca/users/petertaylor>

- wind energy studies

Jim Whiteway

- cloud physics; climate; ozone; Martian atmosphere.

## **OSGOODE HALL LAW SCHOOL**

Paul Emond

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- Environmental Protection Law; Environmental Assessment Law; Land Use Planning; Native Rights

Ikechi Mgbeoji

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- International Environmental Law, Biotechnology and Law, Env Law in Developing Countries

Liora Salter

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- Environmental Law

Dayna Scott

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- Environmental Law & Justice, Gender + Environmental Health, Toxic Substances, Pollution, and Feminist Theory of the Body

Cynthia Williams

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- Network for Sustainable Financial Markets, Climate Bonds Initiative, EPA Environmental Finance Advisory Board

Stepan Wood

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- corporate social responsibility, sustainability, voluntary standards, climate change, and environmental law

## **YORK UNIVERSITY LIBRARIES**

Yanli Li

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- Green trade; Green logistics management; Public-Private Partnerships and Sustainability of Digital Libraries

## **FACULTY OF SCIENCE**

### **DEPARTMENT OF CHEMISTRY**

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- solar energy conversion, sustainable clean renewable alternative energy, photovoltaics

Geoffrey Harris  
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- biospheric sources of greenhouse gases (CH<sub>4</sub>, N<sub>2</sub>O), biomass burning, regional oxidant formation

Donald Hastie  
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- gas/particle separation, Hydrocarbons in the atmosphere

Robert McLaren  
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- pollution, emission sources, controlled and chaotic atmosphere studies

Michael Mozurkewich  
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- Atmospheric aerosol particles, climate change and the health effects of air pollution

Pierre G. Potvin  
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- electrodes in photovoltaic cells, Direct Methanol Fuel Cells, electrochemical CO<sub>2</sub> reduction

Jochen Rudolph  
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- Volatile organic compounds, secondary pollutants in the atmosphere,

#### EMERITI

A. B. P. Lever  
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- Photochemical Generation, Solar Energy Conversion

#### ADJUNCT FACULTY

Shao-Meng Li

- Air Quality Process Research, contributing to the SMOG scientific understanding

#### DEPARTMENT OF MATHEMATICS & STATISTICS

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- wind/solar energy, Renewable energy integration problem, Transmission security and smart grid

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- Environmental Computation & Energy Simulation

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- Climate Change Modelling, Climate Projections

DEPARTMENT OF PHYSICS AND ASTRONOMY

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- sensing platforms and photovoltaic devices

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- environmental monitoring, climate change

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- urban air pollution

DEPARTMENT OF SCIENCE AND TECHNOLOGY

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- sustainable development

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- indigenous knowledge and environmental risk

DEPARTMENT OF BIOLOGY

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- Ecology, Herbivory, Plant-Animal Interactions, Restoration Ecology, Forest Management, Invasive Species, Non-indigenous Plants, Prescribed Burning, Fungal Endophytes, Plant Defences, Science Policy, Climate Change Impacts on Ecosystems, Sustainability, Human-Wildlife Interactions, Urban Ecology Plant Population Biology, Restoration Ecology

Carol Bucking

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- Animal Physiology, environmental adaptation, integrative physiology, molecular biology

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- Ion-regulatory Physiology of Aquatic Dipteran Larvae

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- Animal Physiology, Endocrinology, Environmental

Christopher Lortie

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- Understanding system theory, structure, and dynamics of communities including plants, animals, and people.

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- Behaviour, ecology, evolutionary biology

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- Limnology and paleolimnology, aquatic community and ecosystem ecology, stressors on lake and pond systems including human activities and recent climate change.

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- Aquatic Ecology, Limnology, Community Ecology, Quantitative Ecology, Multivariate Statistics, Climate Change

Joel Shore  
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- Evolutionary biology, ecology and population biology, genetics, plant biology

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- Ecology and population biology, evolutionary biology, animal biology and physiology, Behaviour ecology, and conservation biology. Evolution of behaviour in birds.

Amro Zayed  
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- Population genetics, Genomics, Behavioural Genetics

## EMERITI

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- understand the impacts of multiple environmental stressors on the million lakes

## ADJUNCT FACULTY

Michael Arts  
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- Ecology, Limnology, Physiology, Photobiology

Keith Somers  
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- Aquatic community ecology, specifically understanding, modelling, and predicting the response of aquatic communities to natural and anthropogenic environmental gradients.

## FACULTY OF EDUCATION

Steve Alsop

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- science and technology; public science; epistemology; environmental education; activist pedagogy

Sarah Barrett

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- ecology and ethics; social justice in the physical and ecological sciences; chemistry, physics, and teacher identity

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- urban studies; urban environments; human geography; space, place, and identity in teaching and education

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- indigenous epistemology and education; aboriginal knowledge in institutions

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- environmental and sustainability education; Jane/Finch community stewardship; sustainability in teaching; refugee studies

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- equity and social justice in curriculum; university-community partnerships; Jane/Finch

Esther Fine

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- social justice, diversity, and equity; alternative schooling

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- health, social justice, and homelessness; housing and at-risk communities

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- aboriginal knowledge and epistemology; learning from the land; adult education

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- social justice education; human rights and urban education

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- volunteer labour; nonprofit organizations; economics

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- human rights in education; access and equity in education; law and governance

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- farming and education; urban geography

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- policy, policymaking, and social justice in education; public participation and access in policy

#### ADJUNCT AND CROSS-APPOINTED

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- oral and indigenous history; folklore and environmental education

#### POST-DOCTORAL FELLOWS

Philip Vaughter

- sustainability in higher education

### **GLENDON CAMPUS**

#### SOCIOLOGY

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- environmental social movements; anti-war privatization movements; blue-green coalitions; green workforce

#### HISTORY / CANADIAN STUDIES

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- environmental history of landscapes; common lands in Canada

#### ENVIRONMENTAL STUDIES

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- insect ecology and entomology; forest and urban ecosystems; agriculture; environmental stress; pollution

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- species diversity; aquatic ecosystems; conservation

## ECONOMICS

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- economics of natural resources and the environment

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- environmental economics and natural resources; forest economics

## PSYCHOLOGY

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- conservation management; natural habitats of orangutans

## INTERNATIONAL STUDIES

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- Canadian natural resources; resource extraction; First Nations lands; Canadian North

## **SCHOOL OF THE ARTS, MEDIA, PERFORMANCE AND DESIGN**

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- Sustainability and the Arts, EcoArt, EcoDrama

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- SSHRC funded interactive web documentary OFFSHORE <http://offshore-interactive.com/site/>

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- Creative cultures of urban space and cartographies of place

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- Sustainable Staging and Arts Production

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- intersection of labor, attention, political economy, art practice, and digital media

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- Common Plants project - <http://www.yorku.ca/gardens/>

## Ph.D STUDENTS

Sally Morgan

- MES from York, Earning PhD in Dance, Environmental/Place-Based Educator

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- Performance as a mode and object of literacy education as well as desire to investigate possible “points of contact” between performance and environmental education.

## FACULTY OF HEALTH

### SCHOOL OF HEALTH POLICY AND MANAGEMENT

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- vulnerable communities, ehealth innovations, migration and health, community-based research

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- health equity, gender, and long-term care; restructuring of healthcare

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- ehealth, virtual communities, and decision support systems

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- patient safety culture and long-term care

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- equity in medication access, restructuring of long-term care

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- income inequity, poverty, and social health policy

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- health and human rights, disability policy, globalization and welfare

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- regional health governance models

#### DEPARTMENT OF PSYCHOLOGY

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- community-based research, culture, social equity and social determinants related to mental health of family and child

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- culture, healthcare access, community-based research / social change

#### SCHOOL OF NURSING

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- influence of political, economic, and social forces on quality of (long-term) care

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- social equity and health, poverty and homelessness, healthcare restructuring

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- healthcare access amongst immigrant communities, aging

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- health equity, role of power in public health nursing practice

Elsabeth Jensen  
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- discharge planning; homelessness and mental health,

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- health services sustainability and policy, women's health

Judith Ann MacDonnell  
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- minority health promotion, policy and healthcare access

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- refugee community health, poverty and social determinants

## KINESIOLOGY AND HEALTH SCIENCE

Chris Ardern

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- built environment in physical activity and nutrition, social and economic factors in health

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- sociology; social justice in physical activity

Parissa Safai

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- sociology; sport, physical activity, and health

Sue Vail

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- action research, community health, physical activity

## SCHULICH SCHOOL OF BUSINESS

Ellen Auster

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- Sustainable Competitive Advantage

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- business, environment, sustainability, environmental management, sustainable management

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- sustainability, business ethics, human rights, business and environment, business and sustainability

Yuval Deutsch

- Corporate social responsibility

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- sustainability reporting, social and env. accounting,

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- business and sustainability, energy economics

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- environmental attitudes, corporate social responsibility, environmental management

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• Sustainability Management

Geoffrey M Kistruck  
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• Business and Sustainability

Murat Kristal  
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• sustainable manufacturing,

Dirk Matten  
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• business, environment, sustainability and ethics, environmental management

James McKellar  
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• urban density, intensification & GHG, carbon footprint & cities

Perry Sadorsky  
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• energy usage and markets, business and sustainability

Mike Valente  
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• sustainable development, sustainability orientations,

Scott Yeomans  
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• energy and waste performance, nature- and biologically-inspired models

Charlene Ellen Zietsma  
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• Business and Sustainability, forestry

Detlev Zwick  
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Marketing and Sustainability,

Andrew Crane  
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• business ethics, sustainability and marketing, tri-sector partnership, modern slavery

## **LIBERAL ARTS AND PROFESSIONAL STUDIES (LA&PS)**

### **ADMINISTRATIVE STUDIES**

Asgary, Ali  
asgary@yorku.ca  
• urban disaster mitigation, business continuity planning, economic assessment of disaster risk mitigation measures, disaster economics, post-disaster recovery and reconstruction, agent based modeling, GIS and

virtual technology applications in disaster management.

Doorey, David  
ddoorey@yorku.ca  
• Green labour law

Joel Marcus  
marcus@yorku.ca  
• specializes in the relationship between personal values and the propensity to engage in sustainable corporate actions across the economic, social, and environmental domains.

Ng, Peggy  
peggyng@yorku.ca  
• biostatistics, experimental design, psychometrics and their applications in clinical trials, environmental health, and quality of life in oncology

Nirupama, Niru  
nirupama@yorku.ca  
• disaster risk management; business continuity; physical dynamics of natural hazards; contemporary issues in disaster management; disaster management using GIS and remote sensing techniques; and multi-criteria decision making using fuzzy logic concept

Qudrat-Ullah, Hassan  
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• dynamic decision making, system dynamics modeling, computer-simulated interactive learning environments, and energy planning models

Robinson, Chris  
crobinso@yorku.ca  
• personal finance, retirement planning, corporate governance, financial statement analysis, critical and alternative perspectives on finance and accounting, regulation of payday lending, dividend policy of corporations and case study research of corporate capital budgeting and environmental decision-making

Toyasaki, Fuminori  
toyasaki@yorku.ca  
• sustainable supply chain designs involving environmental and disaster/emergency issues. Specifically, his research interests are closed-loop supply chains and humanitarian logistics

## SCHOOL OF GENDER, SEXUALITY AND WOMEN'S STUDIES

Kainer, Jan  
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• sustainable food production; sustainability training for your farmers

## DEPARTMENT OF HISTORY

Coates, Colin  
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• early French Canada, nationalism, popular culture, environmental history

Hoffmann, Richard C.  
medfish@yorku.ca

- Environmental, economic, and social history of medieval and early modern Europe, notably involving natural resource use (fisheries), human ecology, peasants, frontiers, and intercultural relations.

Kheraj, Sean  
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- historical relationship between people and animals in urban environments

Neill, Deborah  
dneill@yorku.ca

- European Colonialism, History of Medicine, humanitarianism, globalization, food and drink

Podruchny, Carolyn  
carolynp@yorku.ca

- The meeting of Europeans, particularly French, and indigenous peoples, particularly Algonquian speakers, in the North American fur trade. I focus on cultural, social, gender, labour, and environmental questions.

#### DEPARTMENT OF HUMANITIES

Katharine Anderson  
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- environmental science history & wider cultural and social concerns, env science and public life

Jody Berland  
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- Animal Studies, Contemporary Environmental and Posthumanist Theory

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- instruments and media in investigating organic worlds, Cultural Enframing of Nature

#### SCHOOL OF INFORMATION TECHNOLOGY

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- assessment and management of natural resources.

#### DEPARTMENT OF PHILOSOPHY

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- human-animal relations & relationships, animal cognition

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- Bioethics

DEPARTMENT OF POLITICAL SCIENCE

Asher Horowitz

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- Ecology and Political Thought

Robert E. Latham

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- political economy environmental studies, political ecology, international sociology and IR

Gabrielle A Slowey

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- Aboriginal Peoples, Northern Development , Resource Exploration and Development

DEPARTMENT OF SOCIOLOGY

Andil Gosine

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- Environmental Justice/Queer Ecology

Glenn Stalker

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Environmental Sociology, Climate change and pro-environmental beliefs

LAW & SOCIETY (DEPARTMENT OF SOCIAL SCIENCE)

David Szablowski

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- law and globalization; regulation and governance theory; transnational law; non-state regulation; global legal pluralism; extractive industries (oil, mining and gas projects); indigenous rights; Latin America; international financial institutions

CRIMINOLOGY (DEPARTMENT OF SOCIAL SCIENCE)

Amanda Glasbeek

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- gendered fear of crime, risk discourses, and concepts of urban safety

BUSINESS & SOCIETY (DEPARTMENT OF SOCIAL SCIENCE)

Kean Birch

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- Sustainable transitions; sustainable infrastructure; bioenergy; biofuels; bio-economy

Caroline Hossein

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- community economic development in low income communities and examining the disbursement of financial resources along the intersection of identities such as race, class and gender.

JJ McMurtry

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- cooperative difference in alternative energy nationally and internationally, the Social Economy as a green employer, and on the roll of small producer organizations in Fair Trade

Darryl Reed

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- Fair trade; corporate governance, community economic development, business ethics and development ethics.

## WORK AND LABOUR STUDIES

Carla Lipsig-Mumme

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- Climate change; linking adaptation and mitigation to slow global warming; greening the labour process; climate, labour and work.

## URBAN STUDIES (DEPARTMENT OF SOCIAL SCIENCE)

Lisa B Welch Drummond

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- Asian/Pacific Studies , Geography , Urban Social Life, Vietnam, Urban Water and Climate Resilience

Linda Peake

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- gendered social organization of urban space, the articulation of social relations of class, gender, race and sexuality in relation to urban places in Canada, the USA and Guyana

Douglas Young

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- Processes of suburban decline and renewal in Toronto and Leipzig

## INTERNATIONAL DEVELOPMENT STUDIES (DEPARTMENT OF SOCIAL SCIENCE)

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- State-Civil Society Relations; Socio-environmental Conflicts; Extractive Industries; Social Movements; Participatory Democracy; Decentralization and Local Governance; Social Capital; Latin America

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- Indigenous Peoples , Fisheries , International Development Studies, Social Movements, Territorial Autonomous Regimes, Small-Scale Fisheries

Uwafiokun Idemudia

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- Corporate Social Responsibility and the extractive industry; the relationship between natural resources, sustainable development and conflict in the global south; and political ecology and environmental security.

## HEALTH & SOCIETY

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- Women's Health Advocacy; Environmental Health, Toxic Exposures in Domestic Environments; Aging and Caregiving; AIDS in southern Africa; Women and Cholesterol Lowering Drugs; Statin Drugs and Seniors Health

## DEPARTMENT OF ANTHROPOLOGY

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- critical study of bodies and health as well as with her ongoing work with the Cree (Iiyiyu) of northern Quebec

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- Property & nature, Capitalist nature, human-nonhuman, Chile, Guatemala, violence

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- Affective ecologies, plant politics / publics, forms of life in the contemporary arts and sciences

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- Inequality, rural & agrarian societies cross-culturally

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- medical anthropologist who specializes in the anthropology of health and Indigenous health

## DEPARTMENT OF COMMUNICATION STUDIES STUDIES

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## DEPARTMENT OF ECONOMICS

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- Health Economics, Environmental and Natural Resource Economics and Experimental Economics. My particular research interests include empirical investigations of public and private health care finance, emission

permit trading and common pool resource management

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- applied micro economist, I rely mostly on theoretical frameworks to analyze policy questions, particularly as they relate to the environment. Some of my recent theoretical works include analyses of the linkages between trade and the environment, social/moral considerations in voluntary contributions and environmental decisions, and the cultural transmission of environmental attitudes

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- economic growth and development, with applications related to demography and political economy

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- Development Economics; Health Economics

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- Development Economics; Health Economics; human development and capabilities

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- environmental economics, international trade and applied microeconomics. The major focus of my research has been on environmental certification programs; I have studied their impact on international trade, their optimal design, and their effectiveness relative to other policy instruments

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- Econometrics, Environmental Economics, Labour Economics

## DEPARTMENT OF ENGLISH

Vermonja R Alston  
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- Latin American and Caribbean literature (in English, French, and Spanish), Indigenous North American literature, Multiethnic literature of the United States, literary and cultural theory, theories of transnationalism, cosmopolitanism, and diaspora, performance studies, environmental justice literature, and legal theory

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- Rishma Dunlop's teaching and research interests are multidisciplinary and include contemporary fiction and poetry; creative nonfiction; English and World literatures; Canadian literature; literary translation; diasporic literatures; literature of witness; creative writing; cultural studies; aesthetics; fine arts practices; environmental writing, documentary photography; medical humanities and narrative medicine.

David Goldstein  
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- sixteenth- and seventeenth-century British literature, food studies, poetry writing and translation, contemporary poetry and poetics, literary and cultural theory, and book history.

## EQUITY STUDIES

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- social justice and human rights, social inequality and social stratification, anti-racism and anti-discrimination, and the marginalization of racialized urban communities.

Lawrence, Bonita

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- Regulation of Native identity; gender and colonization; Indigenous justice, sovereignty and literature; traditional Native singing.

McNab, David

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Aboriginal Land and Treaty Rights issues in Canada;

- British imperial history; Canadian history; Ontario history.

## DEPARTMENT OF GEOGRAPHY

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- urban social and political geography, geography and planning

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- climate change, greenhouse gas emissions, Arctic Canada, wind energy, carbon dynamics, vector borne diseases, evapotranspiration, urban water budgets

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- German and European studies, urban geography

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- GIS, natural resources assessment, mathematical geology

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- Marxist political economy, state theory, space and state- society relations, international development, labour conditions, social capital, social movements, (agro-)globalization, South Asia

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- cultural and historical geography, Canada and the British imperial world

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- geographies of forced migration/immigration, humanitarian aid in response to conflict/asylum/disasters, refuge (re)settlement, critical and feminist geopolitics

Philip Kelly  
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- economic geography, labour, migration, youth, South East Asia, Philippines, Canada

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- urban transnationalism, immigrant entrepreneurship, education migration

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- feminist geography, geopolitics, postcolonialism, race, social justice and peacekeeping

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- immigration, settlement, integration and urban transformation, settlement services, consumer preference and shopping behaviour, food, culture and identity, Chinese diaspora

Elizabeth Lunstrum  
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- political ecology, political geography, politics of environmental conservation, Southern Africa & North America

Andrew Medeiros  
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- Arctic ecosystems, biogeochemistry, aquatic ecology, environmental biomonitoring, paleoecology, environmental change, biogeography

Jospeh Mensah  
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- critical development theory and Africa, gender and development, space, race and employment, geography of Aboriginal land claims

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- gender and urban labour markets, immigration and Canadian cities, social and economic effects of economic restructuring

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- remote sensing and GIS algorithm development, Boreal forest

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- fluvial geomorphology, forms and processes in alluvial channels

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- political ecology, environmental conservation and conflict, highland Southeast Asia

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- economic/labour geography, geographies of labour markets and unions

Peter Vandergeest  
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- environments and identities in Southeast Asia, agro food systems and industrial aquaculture, cultural politics of development

Patricia Wood  
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- cities, citizenship, identity, diversity, property, territory and attachment to place

Kathy Young  
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- high arctic wetland hydrology, ecohydrology, hydroclimatology, snow hydrology, climate change

AD Research Additions  
Marina Erechtkoukova  
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- model-driven and data-driven decision support in environmental sustainability, application of machine learning techniques to water resources management,

Kelly Thomson  
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- Sustainability, Social Capital and the Canadian ICT Sector

Mark Schwartz  
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- Sustainability and Historical Injustice: Lessons from the Moose River Basin

Susan McGrath  
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- Social Sustainability

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- Social Sciences and Humanities Research Council (SSHRC) Standard Research Grant for her project titled "The Idea"

Alena Kimakova  
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- Program evaluation for the Ontario Ministry of the Environment

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- Climate change and pro-environmental beliefs, behaviours and support for policy: evidence from a survey of Canadians

## SAMPLE THESES

### DOCTORAL DISSERTATIONS

Bieler, Andrew Theodore Cecil  
Communication & Culture, Joint Program with Ryerson University  
Exhibiting Climate Change: An Examination of the Thresholds of Arts- Sciences Collaborations in the Context of Learning for a Sustainable Future  
2014

Biglari, Javad Sadeghzadeh  
Economics  
Essays On Productivity and Resource Reallocation  
2014

Degroot, Dagomar Sebastiaan  
History  
The Frigid Golden Age: Experiencing Climate Change in the Dutch Republic, 1560-1720  
2014

Holmes, Mark Robert  
Environmental Studies  
Testing the Implications of an Integrated Rural Tourism Framework for the Niagara Wine Region  
2014

Lamb, Vanessa Anne  
Geography  
Ecologies of Rule and Resistance: Making Knowledge, Borders and Environmental Governance at the Salween River, Thailand  
2014

Lebel, Sabine  
Communication & Culture  
The Life Cycle of the Computer: A Study in the Materialities of Risk  
2014

Rosa, Vanessa Anne  
Sociology  
Remaking the Nation State: Multiculturalism, Neoliberalism, and Urban Revitalization  
2014

Shrimali, Ritika  
Geography  
Spaces of Corporate Control in Agriculture: A Critical Study of Contract Farming in the Indian State of Punjab  
2014

Watson, Andrew  
History  
Poor Soils and Rich Folks: Household Economics and Sustainability in Muskoka, 1850-1920  
2014

Yoreh, Tanhum Siah

Humanities

The Jewish Prohibition Against Wastefulness: The Evolution of an Environmental Ethic

2014

Zylberberg, David

History

Plants and Fossils: Household Fuel Consumption in Hampshire and the West Riding of Yorkshire

1750-1830

2014

#### MASTERS THESES

Mair, David Graeme

Geography

Boundaries, Narrative Frames, and the Politics of Place in Public Housing Redevelopment: Exploring

Toronto's Don Mount Court/Rivertowne

2014

Upward, Antony

Environmental Studies

Towards an Ontology and Canvas for Strongly Sustainable Business Models: A Systemic Design Science Exploration

2014

### APPENDIX 3: Sustainability Partnerships and Funding Opportunities

| ENTITY / PROJECT                      | SCOPE                            | SECTOR  | WEBSITE   |
|---------------------------------------|----------------------------------|---|---|
| Aboriginal Fund for Species at Risk   | National                         | Environmental                                   | <a href="https://www.retablissement-recovery.gc.ca/afsar-faep/index.cfm">https://www.retablissement-recovery.gc.ca/afsar-faep/index.cfm</a> |
| Atlantic Ecosystem Initiatives        | Provincial/<br>Regional          | Environmental                                   | <a href="http://www.ec.gc.ca/iea-aei/">http://www.ec.gc.ca/iea-aei/</a>   |
| Aboriginal Healing Foundation         | National                         | Social  | <a href="http://www.ahf.ca/">http://www.ahf.ca/</a>   |
| Alberta EcoTrust                      | Regional                         | Environmental                                   | <a href="http://albertaecotrust.com/">http://albertaecotrust.com/</a>   |
| Bill and Melinda Gates Foundation     | International                    | Education, Technology, Global Health            | <a href="http://www.gatesfoundation.org/">http://www.gatesfoundation.org/</a>   |
| Bullitt Foundation                    | Regional<br>(Pacific North-west) | Environmental                                   | <a href="http://www.bullitt.org/">http://www.bullitt.org/</a>   |
| Burlington Community Foundation       | Local                            | Social, Environmental, Economic, Sustainability | <a href="http://www.burlingtonfoundation.org/">http://www.burlingtonfoundation.org/</a>   |
| Canada Cultural Investment Fund       | National                         | Social, Cultural                                | <a href="http://www.pch.gc.ca/eng/1268609659093">http://www.pch.gc.ca/eng/1268609659093</a>   |
| Canada First Research Excellence Fund | National                         | Environmental                                   | <a href="http://www.cfref-apogee.gc.ca/">http://www.cfref-apogee.gc.ca/</a>   |
| Canada Foundation for Innovation      | National                         | Sustainability, Innovation                      | <a href="https://www.innovation.ca/">https://www.innovation.ca/</a>   |
| Canadian Geological Foundation        | National                         | Science   | <a href="http://www.canadiangeologicalfoundation.org/">http://www.canadiangeologicalfoundation.org/</a>                                     |
| Canadian Women's Foundation           | National                         | Social  | <a href="http://www.canadianwomen.org/">http://www.canadianwomen.org/</a>   |
| Caterpillar Foundation                | International                    | Environmental                                   | <a href="http://www.caterpillar.com/">http://www.caterpillar.com/</a>   |
| Chatham Kent Community Foundation     | Local                            | Social, Environmental, Economic, Sustainability | <a href="http://chathamkentcommunityfoundation.ca/">http://chathamkentcommunityfoundation.ca/</a>   |
| Clean Energy Fund                     | National                         | Innovative                                      |   |

| ENTITY / PROJECT   | SCOPE         | SECTOR                                 | WEBSITE   |
|--|---------------|--|---|
| Climate Change Adaptation Fund                           | Local         | Environmental                          | <a href="http://climatechange.gov.ns.ca/">http://climatechange.gov.ns.ca/</a>                 |
| Columbia Institute                                       | National      | Social                                 | <a href="http://www.columbiainstitute.ca/">http://www.columbiainstitute.ca/</a>               |
| Columbian Basin Trust                                    | Regional      | Environmental, Social, Economic        | <a href="http://www.cbt.org/Funding/">http://www.cbt.org/Funding/</a>                         |
| Commonwealth Foundation                                  | International | Cultural, Social, Economic             | <a href="http://www.commonwealthfoundation.org/">http://www.commonwealthfoundation.org/</a>   |
| Community Foundation of Canada                           | National      | Economic, Leadership                   | <a href="http://communityfoundations.ca/">http://communityfoundations.ca/</a>                 |
| Community Interaction Program - St. Lawrence Action Plan | Regional      | Environmental                          | <a href="http://planstlaurent.qc.ca/en/home.html">http://planstlaurent.qc.ca/en/home.html</a> |
| Cottonwood Foundation                                    | International | Environmental, Cultural, Social        | <a href="http://www.cottonwoodfdn.org/">http://www.cottonwoodfdn.org/</a>                     |
| Dreamcatcher Foundation                                  | National      | Aboriginal, Social, Cultural, Economic | <a href="http://www.dcfund.ca/">http://www.dcfund.ca/</a>                                     |
| Drummond Foundation                                      | National      | Social, Health                         | <a href="http://www.drummondfoundation.ca/">http://www.drummondfoundation.ca/</a>             |
| Earth Run Foundation                                     | National      | Sustainability, Environmental          | <a href="http://earthrun.com/">http://earthrun.com/</a>                                       |
| Eastern Ontario Development Program                      | Regional      | Economic                               | <a href="http://www.feddevontario.gc.ca/">http://www.feddevontario.gc.ca/</a>                 |
| ecoENERGY for Renewable Power                            | National      | Innovative                             | <a href="http://www.nrcan.gc.ca/">http://www.nrcan.gc.ca/</a>                                 |
| ecoENERGY Innovation Initiative                          | National      | Innovative                             | <a href="http://www.nrcan.gc.ca/">http://www.nrcan.gc.ca/</a>                                 |
| EJLB Foundation  | National      | Neuroscience, Environmental            | <a href="http://www.ejlb.qc.ca/">http://www.ejlb.qc.ca/</a>                                   |
| Environmental Damages Fund                               | National      | Environmental                          | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                                     |

| ENTITY / PROJECT                                | SCOPE                   | SECTOR                          | WEBSITE   |
|---|-------------------------|---------------------------------|---|
| Fluor   | International           | Environmental                   | <a href="http://www.fluor.com/">http://www.fluor.com/</a>                         |
| Forzani Group Foundation                        | National                | Health, Wellness                | <a href="https://www.fglsports.com/">https://www.fglsports.com/</a>               |
| Gainey Foundation                               | National                | Environmental                   | <a href="http://www.gaineyfoundation.com/">http://www.gaineyfoundation.com/</a>   |
| Gairdner Foundation                             | International           | Biomedical                      | <a href="http://www.gairdner.org/">http://www.gairdner.org/</a>                   |
| George Cedric Metcalf Charitable Foundation     | National                | Environmental, Social, Economic | <a href="http://metcalffoundation.com/">http://metcalffoundation.com/</a>         |
| Great Lakes Sustainability Fund - Water         | Regional/<br>Provincial | Environmental                   | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                         |
| Green Municipal Fund                            | Local                   | Economic                        | <a href="http://www.fcm.ca/">http://www.fcm.ca/</a>                               |
| Habitat Stewardship Program for Species at Risk | National                | Environmental                   | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                         |
| Heritage Canada The National Trust              | National                | Social                          | <a href="https://www.heritagecanada.org/">https://www.heritagecanada.org/</a>     |
| Ivey Foundation                                 | National                | Environmental                   | <a href="http://www.ivey.org/">http://www.ivey.org/</a>                           |
| J.W. McConnell Family Foundation Fund           | National                | Social                          | <a href="http://www.mcconnellfoundation.ca">http://www.mcconnellfoundation.ca</a> |
| James S. McDonnell Foundation                   | International           | Environmental, Sustainability   | <a href="https://www.jsmf.org/">https://www.jsmf.org/</a>                         |

| ENTITY / PROJECT   | SCOPE                             | SECTOR   | WEBSITE   |
|--|-----------------------------------|--|---|
| Lake Simcoe/South-eastern Georgian Bay Clean-Up Fund           | Provincial/<br>Regional           | Environmental  | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                     |
| Lake Winnipeg Basin Stewardship-Fund                           | Provincial/<br>Regional           | Environmental  | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                     |
| Minor Foundation   | International                     | Climate Change                                       | <a href="http://www.minor-foundation.no/">http://www.minor-foundation.no/</a> |
| National Conservation Plan –National Wetland Conservation Fund | National                          | Environmental  | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                     |
| Program of Energy Research and-Development (PERD)              | National                          | Innovative   | <a href="http://www.nrcan.gc.ca/">http://www.nrcan.gc.ca/</a>                 |
| RBC Community Sustainability Projects                          | National                          | Social, Environmental, Science, Economic, Innovation | <a href="http://www.rbc.com/">http://www.rbc.com/</a>                         |
| Science Horizons Youth Internship-Program                      | Local/<br>Regional/<br>Provincial | Social   | <a href="https://www.ec.gc.ca/">https://www.ec.gc.ca/</a>                     |
| Sustainable Development Technology Canada                      | National                          | Innovation   | <a href="http://www.sdte.ca">www.sdte.ca</a>                                  |
| TD Green Streets Program                                       | Local                             | Environmental  | <a href="https://treecanada.ca/en/">https://treecanada.ca/en/</a>             |
| The Actuarial Foundation of Canada                             | National                          | Risk Management                                      | <a href="http://www.afc-fac.ca/">http://www.afc-fac.ca/</a>                   |
| The Alva Foundation  | National                          | Health, Social                                       | <a href="http://www.alva.ca/">http://www.alva.ca/</a>                         |
| The Brainerd Foundation  | National                          | Environmental, Sustainability                        | <a href="http://www.brainerd.org/">http://www.brainerd.org/</a>               |
| The Brian Bronfman Family Foundation                           | National                          | Social   | <a href="http://www.bronfman.ca/home.php">http://www.bronfman.ca/home.php</a> |

| ENTITY / PROJECT                        | SCOPE         | SECTOR                                | WEBSITE   |
|---|---------------|---------------------------------------|---|
| The Canadian Race Relations Foundation  | National      | Race Relations                        | <a href="http://www.crrf-fcrr.ca/en/">http://www.crrf-fcrr.ca/en/</a>   |
| The Cora Foundation                     | National      | Social (Children's issues)            | <a href="http://www.chezcora.com/our-company/cora-fondation">http://www.chezcora.com/our-company/cora-fondation</a> |
| The David and Lucile Packard Foundation | International | Climate Change                        | <a href="http://www.packard.org/">http://www.packard.org/</a>   |
| The Rockefeller Foundation              | International | Environmental                         | <a href="https://www.rockefellerfoundation.org/">https://www.rockefellerfoundation.org/</a>                         |
| The Salamander Foundation               | National      | Environmental                         | <a href="http://www.salamanderfoundation.org/">http://www.salamanderfoundation.org/</a>                             |
| The Virtual Foundation                  | International | Environment, Sustainable Development, | <a href="http://www.virtualfoundation.org/">http://www.virtualfoundation.org/</a>                                   |
| UPS Foundation                          | International | Energy Conservation, Reforestation    | <a href="http://www.community.ups.com/the-ups-foundation/">http://www.community.ups.com/the-ups-foundation/</a>     |
| W. Garfield Weston Foundation           | National      | Environmental                         | <a href="http://www.westonfoundation.org/">http://www.westonfoundation.org/</a>                                     |
| Wildlife Habitat Canada                 | National      | Environmental, Conservation           | <a href="http://www.whc.org/">http://www.whc.org/</a>   |