
GEORGIAN TRIANGLE LIFELONG LEARNING INSTITUTE

2022-2023 Lectures



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fields.

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for people who love to learn

GTLII COURSE REGISTRATION 2022- 2023

Ticket Prices:

Perspectives (4 independent lectures)	\$40
Fall Course (6 lectures)	\$60
Winter Course (6 lectures)	\$60
Spring Course (6 lectures)	\$60

*Please check website regularly for updates when
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Feel free to share this brochure with your family and
friends.

*We look forward to another engaging line up
for 2022-23 season!*

PERSPECTIVES, 2022

Sep 9, 16, 23, 30

Sep 9: *THE POTENTIAL IMPACT OF CLIMATE CHANGE ON INSECTS AND WHY WE SHOULD CARE*

Recent reports suggesting a significant global decline in the numbers of insects are of considerable concern. This presentation discusses the importance of insects in food webs and reasons for the observed declines, as well as outbreaks of certain pests. How climate change will impact our insect populations, and the importance for us humans is also presented.

Jeremy N. McNeil, C.M., FRSC, is Distinguished University Professor and the H. Battle Professor of Chemical Ecology at Western University. He has an interdisciplinary and international research programme in chemical ecology, studying insect migration, as well as host plant-herbivore-natural enemy interactions. He has been very active in promoting public awareness of science for over 45 years.

Sep 16: *UNDERSTANDING THE LINK BETWEEN CONCUSSION AND DEMENTIA*

Epidemiological studies support a link between concussion and increased vulnerability to Alzheimer's Disease. Why would a concussion that perhaps produced only mild symptoms at the time of injury lead to dementia decades later? In this talk Dr. Brown will outline his laboratory's approach to the question of how a slowly simmering response to concussion might lead to Alzheimer's disease.

Dr. Arthur Brown is a Professor of Anatomy and Cell Biology at Western University and a Scientist at the Robarts Research Institute. He obtained his PhD in Medical and Molecular Genetics from the University of Toronto and then studied nerve growth in embryos at the Salk Institute in San Diego. His laboratory is focused on developing strategies to improve regeneration in the injured nervous system.

Sep 23: *THE ETHICS AND SOCIAL IMPACTS OF TODAY'S ARTIFICIAL INTELLIGENCE SYSTEMS*

In this presentation Professor Stark will separate the hype from the reality around artificial intelligence. He will give a brief overview of the history of human fascination with creating artificial beings, describe some of the ways artificial intelligence systems are actually being designed and used today and speak about the ethical and social impacts these digital technologies are having on our everyday lives.

Dr. Luke Stark is an Assistant Professor in the Faculty of Information and Media Studies at Western University. He was previously a Postdoctoral Researcher in AI ethics at Microsoft Research. He holds a PhD from the Department of Media, Culture and Communication at New York University. His work interrogating the historical, social, and ethical impacts of computing and AI technologies has appeared in several journals and newspapers.

Sep 30: *CANADIAN CLIMATE POLICY IN THE HEADWINDS: CAN WE STILL ACHIEVE NET ZERO?*

Daunting challenges face those who seek to strengthen climate policy in Canada, including the economic fallout from the COVID pandemic, deep political polarization, complicated Canada-U.S. relations, and geopolitical tensions. This lecture will explore these constraints but also lay out some opportunities for pushing the country toward Net Zero GHG emissions.

Debora L VanNijnatten is Professor of Political Science and North American Studies, Wilfrid Laurier University, and Faculty Member, Balsillie School of International Affairs. She is editor of the text *Canadian Environmental Politics and Policy* (Oxford, 5th edition in the works) and has written extensively on Canadian climate policy, Canada-US environmental relations and the governance and policy of Green Transitions.

FALL COURSE, 2022
Oct 14, 21, 28, Nov 4, 11, 18

THE CHALLENGE OF POWERING A SUSTAINABLE WORLD

Oct 14: The Science of Energy and Power. Energy, the Master Resource and Builder of the Modern World.

How are energy and power created, measured, and manipulated for our use, and what exactly do we mean by clean, green, and renewable? We take a look at the common scientific principles that are the foundation on which all power generation technologies are built.

Oct 21: Electric Power Generation

We used to call it Ontario Hydro, but there is much more to electricity generation than just falling water! We'll look at the multitude of modern power generation technologies and how they work together to meet our varying energy needs.

Peter Lang spent 40 years in aviation as an arctic pilot, RCAF fighter pilot, and now retired airline captain. In 2008 he founded *Dunedin Energy Systems* and began leading the development of a micro nuclear power plant to meet the growing energy needs of Canada's northern and arctic communities.

Oct 28: The Electricity Distribution Grid. Power to the People

Sometimes referred to as the largest ever machine, this unimaginably complex system of wires, switches, and transformers brings power from the generators to our modern world. How does it work and why does it sometimes fail?

Ismael El-Samahy is currently working as a Manager, Transmission Planning at the Independent Electricity System Operator (IESO). He joined the IESO in 2008 after completing his Ph.D. in Electrical and Computer Engineering from the University of Waterloo, where his research focused on Power Systems Operation and Economics. Ismael is a licensed Professional Engineer with fourteen years of experience in the Electricity Sector in Ontario.

Nov 4: Energy Storage

From hydro reservoirs to mega batteries, energy storage is the key to making intermittent renewable energy reliably available 24/7. There are many promising technologies coming out of laboratories, but can they be scaled up to meet the growing demand of an increasingly electrified world?

Jay Harris earned his supervising Nuclear Operator qualification in Fuel Handling while an employee at the Bruce Nuclear power plant, and later became the first Canadian aboriginal person to graduate from the World Nuclear University program at the University of Glasgow. He also has a background in the RCAF, the RCMP, and served as a police officer at a First Nation in Bruce County.

Nov 11: Nuclear Energy

Nuclear Energy - Clean, reliable, and yet still unloved by many. Whether fission or fusion, nuclear energy holds out the promise of unlimited clean energy, and a bounty of medical isotopes, yet it has strangely failed to meet the wide-spread adoption that was once considered inevitable. So, what is nuclear energy, and how does it work?

Nov 18: Power Generation - Safety and Environmental Impact

No free lunch. A cradle to grave full life-cycle look at the safety and environmental impact of the most common power generation technologies.

Peter Lang returns for the final two lectures.

WINTER COURSE, 2023

Jan 13, 20, 27, Feb 3

OUR WASTE CRISIS AND THE CIRCULAR ECONOMY SOLUTION

It is now undeniable that our “extract – make – use – discard” economy has created a global waste crisis. These lectures explain how many industries, cities and even countries are transitioning to a “Circular Economy”, where resources are used to make products that are designed to be shared, leased, repaired, reused, or returned to their natural state rather than discarded.

January 13: Introduction to the Concept of the Circular Economy: What is It and How can it Lead to a Solution?

Current linear economic models of production and consumption–take-make-waste have proven to be unsustainable. Shifting the economy to a model that is built on environment protection, social well-being, and robust financial health requires demand for better products, business models, and partnerships. Transitioning to a circular economy doesn’t balance economic, environmental, and social priorities in isolation: it delivers them simultaneously.

Jo-Anne St. Godard has served as Executive Director of Circular Innovation Council (formerly Recycling Council of Ontario) since 2001. Within both the public and private sectors she focuses on the development of policies, programs, and practices that accelerate Canada’s transition toward a circular economy, which values environmental and social benefits along with economic prosperity.

Jan 20: How a Collaborative Approach to a Circular Economy can address Mining Impacts and Green Energy Mineral Supply Chains in Canada

Mining and minerals demands are substantially increasing to achieve green energy transition goals. Circular economy strategies, if deployed throughout supply chains, can help to significantly reduce waste and other impacts, while creating a variety of economic values. However, changes are needed to policy and regulations, technology, industrial processes, traceability data systems, product designs, consumer waste recovery and, importantly, strategic partnership.

Alan Young, Director, Materials Efficiency Research Group (MERG), is a facilitator and strategist for a wide range of conservation groups, Indigenous organizations,

progressive companies, and governments across Canada and internationally. His primary focus has been on designing and helping implement social and environmental sustainability strategies to accelerate achievement of a prosperous, equitable, zero waste, low carbon future. He is currently Senior Advisor on Extractives Strategy – Circular Economy Leadership Coalition (2018-present).

Jan 27: The Circular Economy and the Technology Sector

The Circular Economy strives to fix the design problem in our current linear economy that has resulted in a growing amount of hazardous electronic waste. Frances Edmonds, one of Canada’s top sustainability experts, will share how the Technology sector is striving to play their part in achieving a more circular and sustainable economic future.

As head of Sustainable Impact at HP Canada, **Frances Edmonds** is responsible for overseeing HP’s corporate social responsibility programs including global environmental education and volunteer programs. Under her leadership, HP has become the most sustainable technology company in Canada (www.hp.ca/sustainableimpact). Frances has received two Canada Clean 50 awards and recently worked on the Expert Panel on the Circular Economy in Canada.

Feb 3: The Circular Economy and Textiles

Learn about the impacts of the fashion industry with a focus on the amount of waste it generates and the tools available to brands and retailers, as well as to us as consumers of fashion, to help reduce these impacts. How can the fashion industry move from a linear to a circular economy model, and what role do we play in making this a reality?

Kelly Drennan is the Founding Executive Director of the non-profit *Fashion Takes Action* (FTA) which she established in 2007 with the mission to advance sustainability in the entire fashion industry. Working with industry brands, retailers and consumers of all ages, FTA removes barriers to sustainability through education, awareness, research, and collaboration. Kelly is dedicated to addressing textile waste and circularity.

WINTER COURSE, 2023, *continued*

Feb 10, 17

Feb 10: The Circular Economy and Food

Guelph-Wellington has a vision to build Canada's first modern circular food economy. The project - Our Food Future - is led by local government and tackles issues of climate change, food equity, business innovation and waste reduction. Barbara will explain how the project is mobilizing stakeholders towards a Circular food system that designs out waste and pollution.

Barbara Swartzentruber is the Executive Director of the Smart Cities Office at the City of Guelph. She is a public sector innovator with experience at the local, provincial, and national levels. Barbara has taught public policy, community development and advocacy at several Canadian universities and was appointed to the Council of Canadian Academies Expert Panel on the Circular Economy in Canada.

Feb 17: The Circular Economy and Plastics

Our plastic consumption habit and endless supply of disposable products has outpaced waste management and has resulted in a huge amount of plastic waste reaching the natural environment. Dr. Gutierrez will share how the circular economy can promote solutions to the plastic pollution problem by considering up and down stream plastic recycling processes.

Dr. Rafaela Gutierrez received her PhD in Science and Technology Policy from the Institute of Geosciences, UNICAMP, Brazil. She is Co-founder and a Program Lead with the University of Toronto's Trash Team, affiliated with the Rochman Laboratory, Department of Ecology and Evolutionary Biology. The Trash Team, a science-based community outreach group, has the goal of increasing waste literacy and reducing plastic pollution.



SPRING COURSE, 2023

Mar 24, 31, Apr 14, 21

CHINA: PAST, PRESENT AND FUTURE

Mar 24: China's Transformation from a Revolutionary State to a Global Superpower

China has experienced dizzying changes over the past 70 years from the revolutionary Mao era to the market reforms of the Deng period, to the current era of the "China Dream" under Xi Jinping. The lecture will trace these transformations and assess China's prospects in the coming decades.

Victor C. Falkenheim is Professor Emeritus of Political Science and East Asian Studies at the University of Toronto. Educated at Princeton (BA) and Columbia (MA & PhD), he has taught at U of T since 1972. In addition, he has lectured widely in China and worked on a number of CIDA and World Bank projects there over the past two decades. His research interests and publications center on local politics and political reform in China, and most recently issues dealing with migration and urbanization.

Mar 31: China's Great Economic Transformation

This lecture will examine the process of economic reform in China since the late 1970s, a period during which per capita GDP has grown more than fifteen-fold. What allowed reform to begin? What were the key changes making this possible? How have political changes facilitated this process? Moving forward, what are the key challenges China faces in sustaining growth?

Loren Brandt is the Noranda Chair Professor of Economics at the University of Toronto specializing in the Chinese economy. He is also a research fellow at IZA (The Institute for the Study of Labor) in Bonn, Germany. His current research focuses on issues of entrepreneurship and innovation in China, inequality dynamics, and China's long run economic growth and structural change.

Apr 14: What is Really Going on in the South China Sea?

The South China Sea is generally recognized as one of the most important bodies of water in the world politically, strategically, and economically. Newspaper articles often claim that China is seeking to control it and is guilty of "aggression." This is all nonsense. To really understand what is happening, you need to pay close attention to international law, domestic and bureaucratic politics in China, and Jane Austen's *Pride and Prejudice*.

David A. Welch is University Research Chair and Professor of Political Science at the University of Waterloo. He teaches global governance and international security at the Balsillie School of International Affairs. He has written extensively on East Asian security in general and the South China Sea in particular.

Apr 21: How Jade Transformed Our Life: Making Sense of Chinese Heritage in Contemporary Society

Why have jade artworks been profoundly valued in Chinese culture for more than 5000 years? Dr. Shen will take us on a journey back in time to trace how jade was procured, produced, used, and collected for personal adornment as well as its spiritual symbolism. He will also provide insight on the relevance of historical objects in contemporary society.

Dr. Chen Shen is a Senior Curator of Chinese art and culture and Vice-President, Art and Culture, at The Royal Ontario Museum. He also teaches two courses on the art and archaeology of Early China at the University of Toronto. Dr. Chen has curated many exhibitions including *Terracotta Army of China* and *The Forbidden City*.

SPRING COURSE, 2023, *continued*

Apr 28, May 5

Apr 28: Greening China's Agriculture Sector: Roles of the State and Civil Society in the Development of Organic Agriculture

The organic sector in China has been developing rapidly in the past decade and a half due to growing demand from both foreign and domestic markets. State-supported and civil society driven initiatives in organic agriculture strive to address the many challenges facing China's agriculture sector. This lecture contrasts these two groups of initiatives and explains the implications for global endeavours toward a sustainable future.

Dr. Zhenzhong Si is a Project Manager of the MiFOOD project at Wilfrid Laurier University. The project studies food security challenges facing migrants in cities during the COVID-19 pandemic. His research examines food security, sustainable food systems and agriculture and rural development. He coauthored the book *Organic Food and Farming in China: Top-down and Bottom-up Ecological Initiatives*.

May 5: The Connectivity of Hong Kong

As a cosmopolitan city situated at the Pearl River Delta in China's southern maritime edge, Hong Kong plays a unique role as a strategic hub in China's global development. In this lecture, Leong will discuss Hong Kong from a multitude of perspectives of the historical and contemporary contexts and by taking the political, cultural, and economic pulses of the region.

Dr. Jack Hang-tat Leong is Associate Dean of Libraries at York University. His research interests include Hong Kong and Chinese Canadian studies. In his current and former role as the Director of the Richard Charles Lee Canada-Hong Kong Library at the University of Toronto, he has extensive experience stewarding major research collections and leading collaborative initiatives on Hong Kong studies.

