# *The Royal Society of Canada | Class of 2022*

FELLOWS

COLLEGE MEMBERS

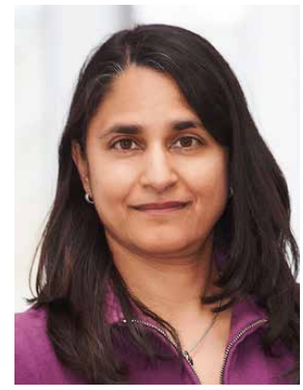
## *Fellows*

**Ehab Abouheif**, a James McGill Professor at McGill University, is an award-winning and internationally renowned biologist whose pioneering research has laid the foundations for the interdisciplinary field of eco-evo-devo (ecological evolutionary developmental biology). By uncovering the rules through which genes, development, and environment interact to influence evolutionary change, Abouheif is leading a paradigm shift in the biological sciences that has important implications for medicine, biodiversity conservation and animal/plant breeding.

*Department of Biology | McGill University | Academy of Science*

**Payam Akhavan** is Senior Fellow of Massey College, University of Toronto, formerly Full Professor at McGill University Faculty of Law and Senior Fellow at Yale Law School. He is a renowned scholar and practitioner of international criminal law, transitional justice, and human rights, having previously served as a UN prosecutor at The Hague. His seminal publications and ground-breaking victim-centred research have had a significant impact on shaping these fields, with a focus on the relevance of global accountability mechanisms for survivors of genocide. He is also a noted public intellectual, who delivered the 2017 CBC Massey Lectures, and an advocate for persecuted minorities, who has made significant contributions to the jurisprudence of international courts and tribunals.

*Massey College | University of Toronto | Academy of Social Sciences*



**Sonia Anand** is internationally recognized for her research on the cardiovascular health of women and populations of diverse ancestral origin. Over an esteemed career, the McMaster University professor of medicine and epidemiology, and senior scientist of the Population Health Research Institute, has earned a global reputation for prioritizing research into women's health, impacting public policy and clinical practice, and developing new therapies that are benefitting high-risk vascular patients globally.

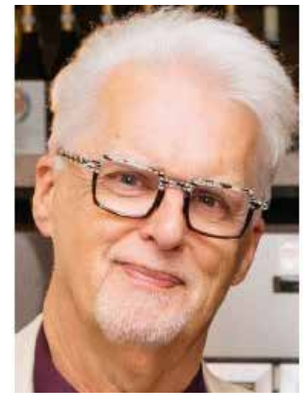
*Department of Medicine | McMaster University | Academy of Science*

**John Archibald** is a Professor of Biochemistry & Molecular Biology and Arthur B. McDonald Research Chair of Excellence at Dalhousie University. He is also the Director of Dalhousie's Institute for Comparative Genomics. Dr. Archibald is the author of more than 170 research articles and two books. He is a Fellow of the American Academy of Microbiology and in 2019 was awarded the Miescher-Ishida Prize for his internationally recognized work on the biology of symbiosis.

*Department of Biochemistry & Molecular Biology | Dalhousie University | Academy of Science*

**Barbara Arneil** is a world-renowned scholar of identity politics, feminist theory, and the history of political thought. Her research has forged innovative and enduring insights into the political consequences of imperialism, colonialism, and liberalism. Her pathbreaking research has exposed discrimination and oppression in Canada and the world by deepening the understanding of how and why so many people are excluded from politics based on gender, disability, age, ethnicity, and indigeneity.

*Department of Political Science | The University of British Columbia | Academy of Social Sciences*



**Richard Arthur's** innovative work on the history and philosophy of science and mathematics in the 17th century has transformed the study of his field. In particular, he is the author of numerous ground-breaking articles and books on the great German philosopher and polymath Leibniz, which have reinvigorated and reshaped work on Leibniz around the world. Professor Arthur has also made important contributions to debates in metaphysics and philosophy of time.

*Department of Philosophy | McMaster University | Academy of Arts and Humanities*

**Kim Baines** is an internationally recognized scholar in the fundamental chemistry of low valent, highly reactive main group compounds. She pioneered the synthesis and chemistry of germasilenes and novel low-valent germanium, tin and gallium cations, opening new areas of scientific inquiry. Capitalizing on the research, she developed the synthesis of new inorganic polymers and main group catalysts and furthered the understanding of semiconductor surface chemistry.

*Department of Chemistry | Western University | Academy of Science*

**Malek Batal** holds the Tier 1 Canada Research Chair in Nutrition and Health Inequalities and is the Director of TRANSNUT, the WHO's Collaborating Centre on Nutrition Changes and Development. Working with transdisciplinary teams, he studies the relationships between population health, the food system and the environment with the aim of addressing inequities between population groups. He works with First Nations in Canada and with Indigenous and rural populations internationally, applying his research findings to improve public policies.

*Département de nutrition | Université de Montréal | Academy of Social Sciences*

**Cornelia Bohne** is a world leader in physical-organic chemistry renowned for using light in novel ways to move beyond research on static molecular structures to trailblazing studies of supramolecular dynamics in complex systems. She has created breakthrough knowledge and continues to have major impacts in areas as broad as fundamental science and smart materials.

*Department of Chemistry | University of Victoria | Academy of Science*

**Katherine Borden's** pioneering work unearthed novel modes by which cancer cells hijack genetic information, by subverting messenger RNA (mRNA) metabolism. Her landmark studies revolutionized our view of central tenets of mRNA biology. Her atomic snapshots transformed our understanding of the mechanics of these processes. Her ground-breaking clinical studies demonstrated that these processes can be targeted in humans providing promising avenues for therapeutic development.

*Institut de recherche en immunologie et en cancérologie & Département de pathologie et biologie cellulaire | University de Montréal | Academy of Science*

**Laurent Brochard** is an intensive care physician working at Unity Health Toronto. He holds the Keenan Chair in Critical Care and Respiratory Medicine and is the Director of the Interdepartmental Division of Critical Care Medicine at the University of Toronto. Dr. Brochard is internationally renowned within respiratory and critical care medicine, and his research on mechanical ventilation has improved the clinical outcomes of millions of patients worldwide.

*St. Michael's Hospital, Keenan Research Centre, Li Ka Shing Knowledge Institute | University of Toronto | Academy of Science*

**Louis-Charles Campeau** has made lasting contributions in organic synthesis, drug discovery, practical drug synthesis, and research leadership, during a 15-year career at a top innovative pharmaceutical company. He has published in high-impact journals, made significant scientific innovations, and engaged the public. He has contributed to the discovery of over 30 novel drug candidates in human clinical trials and, contributed to five seven new marketed therapies impacting human health.

*Process Research & Development | Merck & Co., Inc. | Academy of Science*

**Christine Chambers** is an internationally recognized leader in children's pain management. She spearheaded Solutions for Kids in Pain, a national network dedicated to putting research into practice, and champions research supporting the well-being of children as Scientific Director of CIHR's Institute of Human Development, Child and Youth Health. Identified as one of Canada's Most Powerful Women, she is passionate about research impact and patient and public engagement in health research.

*Departments of Psychology & Neuroscience and Pediatrics | Dalhousie University | Academy of Social Sciences*

**David Chariandy** is an award-winning author and major contributor to the field of Black Canadian literature. His novels are celebrated internationally for their meticulous attention to language and narrative form. Together with his scholarship and non-fiction, his body of work details the social struggles and intimate relations of diasporic life. A committed promoter of creative writing in Canada, he supports both emerging and established authors through mentorship, editing, and institutional service.

*Department of English | Simon Fraser University | Academy of Arts and Humanities*

**Sylvain Chemtob** (Canada Research Chair and Leopoldine Wolfe Chair in Vision) is a world-renowned neonatal pharmacologist, and leading authority on mechanisms of retinopathy of prematurity; he pioneered unprecedented biological concepts and contributed to reform care of premature children. His work on ibuprofen to treat the ductus arteriosus is now standard of care. His discovery of novel allosteric anti-inflammatory drugs transforms treatment against preterm birth to improve newborn outcome.

*Départements d'ophtalmologie et de pédiatrie | Université de Montréal | Academy of Science*

**Jiahua Chen** has made fundamental contributions to statistics, particularly in mixture models, empirical likelihood, sampling theory, and the design of experiments. His work on the extended information criteria shreds new insight into the variable selection when the number of predictors is comparable to the sample size. The result is particularly significant in the big data era. His works in mixture models are groundbreaking. His technical strength enables him to solve challenging problems.

*Department of Statistics | The University of British Columbia | Academy of Science*

**Villy Christensen** is one of the most highly-cited fisheries scientists in the world today. He is the principal architect behind the Ecopath with Ecosim ecosystem modelling framework and software, which is used by hundreds of scientists worldwide. His research focuses on ecosystem-based management with emphasis on human impact, food web effects, and environmental conditions including climate change—notably with focus on the balance between social and ecological tradeoffs in management.

*Institute for the Oceans and Fisheries | The University of British Columbia | Academy of Science*

**Wendy Hui Kyong Chun** is SFU's Canada 150 Research Chair in New Media and the Digital Democracies Institute. An internationally renowned digital media scholar, she draws from her training in both engineering and the humanities to analyze contemporary media phenomena: from the rise of the Internet to discriminatory predictive algorithms. Her research creates interdisciplinary data fluencies to express, imagine, and create public engagements with our data-filled world.

*School of Communication | Simon Fraser University | Academy of Arts and Humanities*

**Steven J. Cooke** is an interdisciplinary scholar whose work spans the natural and social sciences, with a focus on solving complex conservation problems. He defined the nascent discipline of conservation physiology and is a world leader in freshwater biodiversity conservation, animal biotelemetry, and fisheries science. Cooke founded the Canadian Centre for Evidence-Based Conservation and is well known for science communication and embracing a co-production research model with diverse partners.

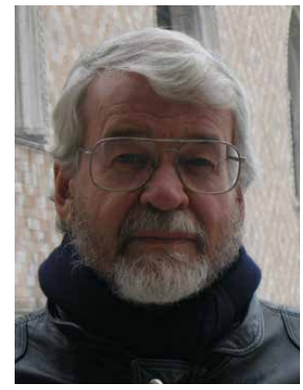
*Department of Biology and Institute of Environmental and Interdisciplinary Science | Carleton University | Academy of Science*

**Nicholas Coops** is Professor and Canada Research Chair (Tier 1) in remote sensing at the University of British Columbia. He is a global leader in using airborne technologies to understand forest structure and function, and how it impacts the overall Earth System across a range of spatial and temporal scales. He is highly cited and winner of numerous international and Canadian scientific awards.

*Department of Forest Resources Management | The University of British Columbia | Academy of Science*

**Marie-Claire Cordonier Segger** is a pioneering full professor and renowned jurist in sustainable development law and governance, advancing solutions to climate change, natural resources degradation and other critical global sustainability challenges while interactionally informing UN treaty design and compliance. As international award-winning CISDL Senior Director, her ground-breaking scholarly publications include the textbook *Sustainable Development Law* (OUP 2004, 2024); *Athena's Treaties* (OUP 2021) and the *Implementing Treaties for Sustainable Development* series (CUP 2008-).

*School of Environment, Enterprise and Development | University of Waterloo | Law and International Studies | University of Cambridge | Academy of Social Sciences*



**John Edward Crowley** is George Munro Professor of History and Political Economy, Emeritus, at Dalhousie University. His recent publications include *Imperial Landscapes: Britain's Global Visual Culture, 1745-1820* (Yale University Press, 2011), and *Sugar Machines: Picturing Industrialized Slavery* (2016) and *How Averages Became Normal* (2023) in the American Historical Review. His fellowships include the Guggenheim Foundation, the National Humanities Center, the Bellagio Center, the École Normale Supérieure, and the Canada Council.

*Department of History | Dalhousie University | Academy of Arts and Humanities*

**Miriam Diamond** is internationally recognized for ground-breaking work uncovering sources and pathways for exposure to persistent organic pollutants. Her research has helped to confirm serious threats to ecosystem and human health. Her work plays a significant role in engaging the public and informing policy development to address the control and elimination of toxic and persistent chemical pollutants.

*Department of Earth Sciences and School of the Environment | University of Toronto | Academy of Science*

**Roussos Dimitrakopoulos** is the world's leading authority in stochastic mine modelling and the optimization of planning and production scheduling of industrial mining complexes. His research has fundamentally shifted the way the mining industry solves planning problems. He has pioneered a new framework that integrates and manages uncertainty in supply and demand. He has been awarded an exceptional third term renewal of his Canadian Research Chair (Tier 1) in Sustainable Mineral Resource Development.

*Department of Mining and Materials Engineering | McGill University | Academy of Science*

**Diana Dimitrova** is a leading authority in South Asian Studies and Professor of Hinduism and South Asian religions at the Université de Montréal. Her international reputation is based on her pioneering work on Hinduism and Hindi theater, otherness, cultural identity and gender. Her numerous books and articles have earned her great influence and recognition both in Canada and internationally.

*Faculté des arts et des sciences | Université de Montréal | Academy of Arts and Humanities*

**Gregory Edgecombe** is a palaeontologist and systematic biologist investigating the evolutionary history of the largest animal phylum, the Arthropoda. His research integrates fossils into animal phylogenies based on living species, including their molecular data. He is a Merit Researcher at The Natural History Museum in London, where he has been a Research Leader since 2007. He was elected a Fellow of the Royal Society in 2018.

*Natural History Museum, London | Academy of Science*

**Janet A. W. Elliott** is one of the world's leading engineering scientists, known for profound insight in thermodynamics. Her creative and elegant integration of mathematics and experimental data has addressed many long-standing problems across a wide array of disciplines in science, engineering, and medicine, particularly in surface science and cryobiology. Her work has expanded thermodynamics to new complexity, new length scales, and new disciplines, and has provided leading cryopreservation protocols.

*Department of Chemical and Materials Engineering | University of Alberta | Academy of Science*

**Penelope Farfan** is an award-winning scholar whose interdisciplinary research on feminist and queer performance has reshaped the fields of modernist theatre, drama, dance, and performance studies. She is also an award-winning editor and an internationally recognized scholar of contemporary feminist theatre whose research has foregrounded Canadian playwrights while also advancing knowledge of playwriting by women from around the world over the past thirty years.

*School of Creative and Performing Arts | University of Calgary | Academy of Arts and Humanities*

**Aaron Fenster** is Professor in the Department of Medical Biophysics and Chair of the Imaging Sciences Division of the Department of Medical Imaging at Western University. He is internationally known as a pioneer of the development of 3D ultrasound imaging. His career in medical imaging has been focused on unmet patient needs as the driving force behind his developments, which have made invaluable contributions to Canadian medical imaging science and technology.

*Departments of Medical Biophysics and Medical Imaging | Western University | Academy of Science*

**Gabor Fichtinger** is a distinguished researcher who has made seminal contributions to the field of computer-assisted medical interventions. His work in medical robotics and surgical navigation paved the way for many modern diagnostic and therapeutic techniques. He is a renowned innovator and mentor, and a dedicated developer of free open-source software resources that are used around the world in education, research, and industry.

*School of Computing | Queen's University | Academy of Science*

**William Fisher** is an internationally recognized health psychologist who has contributed foundational theory and research aimed at understanding health behavior risk and promoting health behavior change. Fisher and Fisher's Information—Motivation—Behavioral Skills (IMB) model identifies specific drivers of health behavior risk and specific avenues for intervention to promote risk reduction behavior change. The IMB model has been applied worldwide to understanding and promoting health behaviors as diverse and consequential as HIV/AIDS prevention, women's, men's, and adolescent's sexual and reproductive health, vaccine uptake, and sexual consent, and the IMB model is regarded as a fundamental advance in prevention science.

*Department of Psychology | Western University | Academy of Social Sciences*

**Marcel Franz** is a Professor of Physics at The University of British Columbia and a Deputy Scientific Director of The Stuart Blusson Quantum Matter Institute. Franz is a leading expert in theories of topological quantum matter, unconventional superconductivity and strongly correlated electron systems. He is known for making important contributions to our understanding of high-temperature cuprate superconductors, topological insulators, and most recently for theoretical work establishing foundations of topological superconductivity that forms a basis for novel approaches to quantum computation.

*Faculty of Science | The University of British Columbia | Academy of Science*

**Mayank Goyal** is a leading researcher and innovator in acute ischemic stroke treatment worldwide. His leadership in randomized trials (ESCAPE, SWIFT PRIME and HERMES collaboration) changed stroke care and established mechanical thrombectomy worldwide. Subsequently, through the ESCAPE-NA1 trial, he showed that neuroprotection in humans is possible. Mayank developed multiphase CT angiography, a technique for fast imaging diagnosis of acute stroke that is now routinely used across the world.

*Department of Radiology | University of Calgary | Academy of Science*

**Royston Greenwood** is the most important scholar in institutional theory in Canada with an outstanding international reputation. He elaborated a theory of organizational change within institutional theory that showed how organizations adopt new organizational forms and practices through dynamic internal processes by both reacting to, and shaping, institutional pressures. He reinvented the study of professional and knowledge-based organizations as central actors in a knowledge based society and economy.

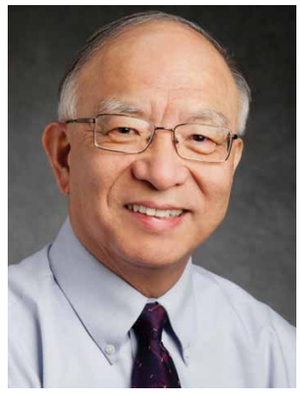
*Department of Strategy, Entrepreneurship & Management | University of Alberta | Strategy Group | University of Edinburgh | Academy of Social Sciences*

**Carl Haas** has contributed seminal new knowledge in the principles behind, the interdependencies among and the circular economic applications of computer vision, mixed reality, building information modeling and human-robotic-systems. Key barriers in the way of moving toward a circular economy in the built environment include the scale, complexity, and uncertainty associated with constructing, maintaining and deconstructing our built environment. His contributions improve complex, built environment systems' performance.

*Department of Civil and Environmental Engineering | University of Waterloo | Academy of Science*

**Celia Haig-Brown**, an Anglo-Canadian scholar, has spent her career committed to respectful and reciprocal research and practice working closely with Indigenous collaborators from Secwépemc territory to the Naskapi Nation. Her 1988 book, based on testimonies of Indian residential school survivors, has served as the basis for two films and a 2022 version with Indigenous contributions. Her next SSHRC-funded film: *Rodeo Women: Behind the Scenes* is in post-production.

*Faculty of Education | York University | Academy of Social Sciences*



**Jiawei Han**, PhD (University of Wisconsin, 1985), Professor (Computing Science, Simon Fraser University, 1987-2001); now Michael Aiken Chair Professor, University of Illinois at Urbana-Champaign. Fellow of ACM, Fellow of IEEE, received ACM SIGKDD Innovation Award (2004), IEEE/CS Technical Achievement Award (2005), IEEE/CS W. Wallace McDowell Award (2009), and Japan's Funai Achievement Award (2018). He is internationally recognized for his contributions to knowledge discovery from data and data science.

*Department of Computer Science | University of Illinois at Urbana-Champaign | Academy of Science*

**Randy Allen Harris** researches the intersection of rhetoric, linguistics, cognitive neuroscience, and Artificial Intelligence at the University of Waterloo, where he is a Professor of English Language and Literature and Director of the multinational, multisectoral, and multidisciplinary research project, the Rhetoricon Database. His books include *The Linguistics Wars* ("outstanding"—Nature), *Rhetoric and Incommensurability* ("a real tour de force"—*International Studies in the Philosophy of Science*), and the pathbreaking *Voice Interaction Design* ("supremely practical"— *ACM Books*).

*Department of English Language and Literature | University of Waterloo | Academy of Arts and Humanities*

**Allan Hepburn**, an internationally renowned literary scholar, has published many books and articles on twentieth-century British, Irish, and American novels. Mid-century literature and culture are his particular expertise. His publications focus on convergences among espionage, human rights, citizenship, nuclear extinction, the Second World War, diplomacy, and fiction. He is a recognized authority on the novelist Elizabeth Bowen. He holds the James McGill Chair in Twentieth-Century Literature at McGill University.

*Faculty of Arts | McGill University | Academy of Arts and Humanities*

**Steven J. Hoffman** is a world-leading authority on global health law and the global governance of health threats that transcend national borders. He has achieved important intellectual breakthroughs by combining law and epidemiology to address challenges faced by the numerous governments and United Nations agencies that rely on his advice. He is a leading voice in public health, a champion for evidence-informed policymaking, and a frequent contributor to news media.

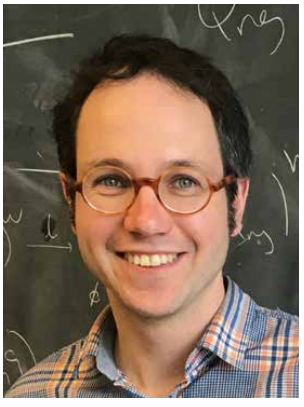
*Public Health Agency of Canada | Global Health, Law, and Political Science | York University | Academy of Social Sciences*

**Richard Hughson** is Schlegel Research Chair in Vascular Aging and Brain Health in the Schlegel-UW Research Institute for Aging. His NASA award-winning research revealed accelerated vascular aging for astronauts on the International Space Station and implications for vascular aging on Earth. His pioneering work on human cardiorespiratory adaptations to exercise and physical inactivity continues to profoundly influence research directions in Canada and around the world.

*Faculty of Health | University of Waterloo | Academy of Science*

**Esyllt Jones** is an internationally recognized historian of pandemic influenza and the history of socialized health care in Canada, whose work is characterized by strong public engagement. She is the author or editor of seven scholarly books, several of which are prize winners. She was recently appointed Humanities Research Professor in the Faculty of Arts. She is a past member of the RSC College of New Scholars (2014-2021).

*Departments of History and Community Health Sciences | University of Manitoba | Academy of Arts and Humanities*

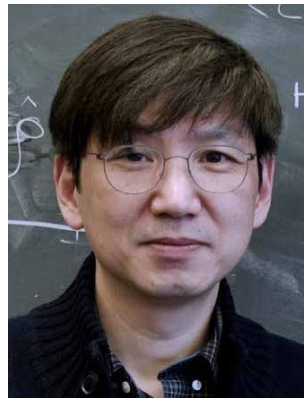


**Joel Kamnitzer** has explored geometric objects related to Lie groups, inspired by ideas from theoretical physics. Using these geometric objects, Kamnitzer uncovered deeper structures in the representation theory of Lie groups: especially canonical bases and categorification. His knot homology construction inspired mathematicians and physicists, leading to great advances in understanding the link between these fields.

*Department of Mathematics | University of Toronto | Department of Mathematics and Statistics | McGill University | Academy of Science*

**John-Michael Kendall's** research covers pure and applied geophysics, with connections to mineral physics, geodynamics, natural resources and engineering. Leading seismic field experiments in geologic settings ranging from the Canadian Arctic to Ethiopia, he has made pioneering contributions to the study of the structure and dynamics of the Earth's interior, with a focus on seismic anisotropy.

*Department of Earth Sciences | University of Oxford | Academy of Science*



**Yong Baek Kim** is a theoretical condensed matter physicist and a professor at the University of Toronto. He has made significant contributions to theoretical understanding of emergent quantum phenomena in strongly spin-orbit coupled quantum materials, which include quantum spin liquids and novel quasiparticles. He received Guggenheim Fellowship (2022), Simons Fellowship (2022), Killam Fellowship (2018), Brockhouse Medal (2017), Fellow of American Physical Society (2012), Canada Research Chair (2002), Sloan Fellowship (1999).

*Department of Physics | University of Toronto | Academy of Science*

**Hendrik Kraay** is one of the most influential North American historians of Brazil; his scholarship has been foundational to our understanding of Brazil's birth as an independent state and its nineteenth-century empire. Kraay's sophisticated, innovative, and meticulous research has shaped local and global scholarship on Brazil, influencing the way both historians and the public view the complex history of the largest country in Latin America.

*Faculty of Arts | University of Calgary | Academy of Arts and Humanities*

**Marc Lapprand** is recognized as the world's leading expert on the French writer Boris Vian, as well as on the Oulipo, on Pataphysics and, more broadly, on the literary theory, Georges Perec, Martin Winckler and Jacques Jouet. He is undoubtedly the foremost expert in these fields, where he has shone with his sustained and internationally recognized production, as evidenced by the influence of his publications and his many conferences around the world.

*Département de français et d'études francophones | University of Victoria | Academy of Arts and Humanities*

**Anita Layton**, Professor of Applied Mathematics at the University of Waterloo, is an internationally acclaimed authority and leading researcher in mathematical medicine and biology. She has solved long-standing problems in scientific computing and renal physiology. She is recognized for her pioneering contributions to computational methods for fluid-structure interaction problems, and to mathematical modeling of mammalian physiology and pathophysiology, including the first sex-specific models of kidney physiology and blood pressure regulation.

*Department of Applied Mathematics and Cheriton School of Computer Science | University of Waterloo | Academy of Science*

**Isabelle Le Breton-Miller** is Chair of Succession and Family Enterprise at HEC Montréal. Her studies of family businesses have revealed them to be an unusually sustainable and stakeholder-friendly form of organization. Her internationally acclaimed research into their economic performance, strategic conduct, corporate governance and managerial succession have helped to establish the field of family business as a rigorous and vibrant academic discipline.

*Département de management | HEC Montréal | Academy of Social Sciences*

**André Lecours** is an internationally renowned political scientist. His work on nationalism and federalism stands out for the breadth of the comparisons made, its theoretical scope and its analytical power. It has raised the profile of the Canadian context in comparative politics and enriched the study of Canadian politics by incorporating findings from other multinational federal democracies.

*École d'études politiques | University of Ottawa | Academy of Social Sciences*

**Dana Lepofsky** is a Professor in the Department of Archaeology at Simon Fraser University. She seeks to understand the long-term relationships among Indigenous Peoples and their environment and to situate these relationships in current social and ecological contexts. She brings together diverse knowledge holders from within the academy and beyond and builds long-term meaningful partnerships with the descendent communities whose past she is privileged to study.

*Department of Archaeology | Simon Fraser University | Academy of Social Sciences*

**Kai Li**, Canada Research Chair in Corporate Governance, is the world's leading expert in corporate finance research. Her analysis of governance and innovation has transformed research on executive compensation design, shareholder monitoring, and corporate innovation. Her research on human capital and technological synergies in takeovers has profound policy implications for fostering creative breakthroughs, and her pioneering approach to measuring organizational cultures has reinvigorated research on their influence on business decision-making.

*Sauder School of Business | The University of British Columbia | Academy of Social Sciences*

**Guojun Liu**, Canada Research Chair in Materials Science at Queen's University, is a pioneer and world leader in the field of materials science. In particular, he has led the development of nano- and micro-structured materials constructed from block and graft copolymers; their self-assembly or directed-assembly; and the ability to control and manipulate their shape, size, function roles and stability, to make important fundamental and applied scientific contributions.

*Department of Chemistry | Queen's University | Academy of Science*

**Gergely Lukacs** proposed novel methods to treat cystic fibrosis (CF), a prevalent "conformational disease" caused by numerous mutations that misfold the CF-protein. Lukacs showed that, albeit single preclinical drugs cannot correct CF-protein misfolding, rationally selected drug-combination leads to efficacious treatment, used clinically since 2019 and suggest new treatment strategies for other conformational

diseases. His studies also identified cell-surface protein quality-control mechanisms and their contribution to various conformational disease pathogenesis, including CF.

*Department of Physiology | McGill University | Academy of Science*

**David Malkin** is the foremost Canadian expert in the field of childhood cancer genetics. His pioneering studies have enhanced our understanding of the molecular basis for genetic predisposition to childhood and young adult cancer. Through the methodical introduction of gene testing and development of early tumor detection strategies, Dr. Malkin's research has created a global paradigm shift in the care of children at genetic risk for cancer.

*The Hospital for Sick Children | University of Toronto | Academy of Science*

**Laura Marks** is a media art and philosophy scholar with an intercultural focus. Over the past 25 years, she has written five influential books, introduced a new theory of multi-sensory perception, challenged the origins of media art through her explorations of non-Western genealogies, and proposed sustainable solutions to the impact of media on the environmental crisis. She is also internationally recognized as a curator of experimental media art.

*School for the Contemporary Arts | Simon Fraser University | Academy of Arts and Humanities*

**Megumi Masaki** is a Japanese-Canadian pianist and multimedia performing artist recognized as a leading interpreter of new music, and an innovator that reimagines the piano, pianist and performance space. Her work pushes boundaries of interactivity between sound, image, text and movement in multimedia works through new technologies. Over 70 compositions have

been created with/for Megumi and she has premiered 150 works worldwide. Megumi was appointed to the Order of Manitoba.

*School of Music | Brandon University | Academy of Arts and Humanities*

**Michael Masson** has made internationally recognized contributions to the study of human cognition. He developed one of the first neural network models of the influence of semantic context on word reading and has conducted innovative research on the unconscious influences of learning and memory on skilled reading. His work on embodied cognition provided groundbreaking evidence regarding action representations and their contributions to the identification of objects and to language comprehension.

*Department of Psychology | University of Victoria | Academy of Social Sciences*

**Stephen McAdams** is one of the world's top researchers in the cognitive dynamics of music listening. Holder of a Canada Research Chair in Music Perception and Cognition at McGill University since 2004, he is exceptionally gifted at bridging the disciplines of the arts, humanities, and social sciences. His research has revolutionized the role of cognition within music scholarship, through collaborations with music theorists, composers, performers, conductors, and music technologists.

*Schulich School of Music | McGill University | Academy of Social Sciences*

**Heidi McBride** is an international leader in the field of mitochondrial dynamics and signaling. Awarded a Canada Research Chair in Mitochondrial Cell Biology, she is renowned for her discovery of mitochondria-derived vesicles, whose functions range from quality control to peroxisomal biogenesis and immune signaling. Her research has had a profound impact in areas of neurodegeneration, metabolic syndromes and rare diseases.

*Montreal Neurological Institute | McGill University | Academy of Science*

**Steven Paul Miller**, is a physician-scientist leader whose brain-imaging studies of critically-ill newborns identified the power of early-life intensive care unit experience to shape the trajectory of brain development through childhood. His findings led a paradigm shift from brain injury as a fixed-event to a focus on "everyday" interventions that he showed are modifiable to promote brain maturation across the life-course.

*Department of Pediatrics | The University of British Columbia | BC Children's Hospital*
*The Hospital for Sick Children | University of Toronto | Academy of Science*

**Cynthia Milton** is internationally recognized for her work on poverty and colonialism, and post-conflict memory, human rights and artistic representations, in particular in Latin America. Her innovative, interdisciplinary approach has carved out new fields in the study of the legacies of political violence, with attention to diverse and inclusive modes of historical reckoning. She was member of the Inaugural Cohort and former President of the College of New Scholars.

*Department of History | University of Victoria | Academy of Arts and Humanities*

**Ian Moore** is the world leader in the analysis and design of buried structures used in municipal and highway applications. Using a powerful combination of numerical and physical modelling, Ian has advanced fundamental understanding of strength and other performance limits of metal, polymer and composite pipes used for drainage and water supply, in modelling of nonlinear soil-structure interaction, and in characterizing the stability of new, deteriorated, and repaired pipe structures.

*Faculty of Engineering and Applied Science | Queen's University | Academy of Science*

**Catherine Mulligan** is an internationally recognized expert in the decontamination of water, soils, and sediments, and a pioneer of green remediation technologies. She is the founding Director of the Concordia Institute of Water, Energy and Sustainable Systems. Her fundamental and applied contributions to research and her service to the engineering profession have been recognized with prestigious awards, including the John B. Stirling Medal from the Engineering Institute of Canada.

*Department of Building, Civil and Environmental, Engineering | Concordia University | Academy of Science*

**Charmaine A. Nelson** is a Provost Professor of Art History and the founding director of the Slavery North Initiative at the University of Massachusetts - Amherst. Her ground-breaking research explores representations of and production by enslaved Africans within Transatlantic Slavery in Canada, the Caribbean, and the USA. An award-winning scholar, she has published 7 books, and given 300 talks, and over 240 interviews in Europe, the Caribbean, and North America.

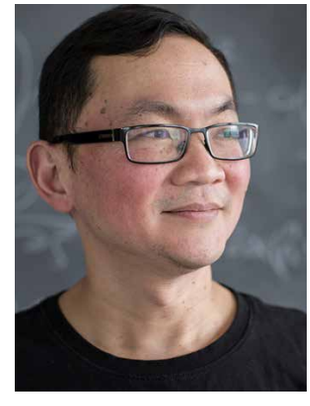
*Art History and Contemporary Culture Division | NSCAD University | Academy of Arts and Humanities*

**Adrian M. Owen** is Professor of Cognitive Neuroscience and Imaging at the University of Western Ontario, Canada and co-directs the CIFAR Brain, Mind, and Consciousness program. His research combines structural and functional neuroimaging with neuropsychological studies of brain-injured patients. Owen has published over 400 scientific articles and chapters and a best-selling popular science book 'Into the Gray Zone'. He was awarded an OBE in 2019 for services to scientific research.

*Department of Physiology and Pharmacology | Western University | Academy of Science*

**Linda Peake's** award-winning research integrates feminism and anti-racism into theorizations of urban everyday life, inspiring scholarship in human geography and urban studies, as well as promoting equity and diversity in the academy. Her original body of work on women as gendered urban subjects has invigorated critiques of canonical knowledge production, utilizing methodologies that engage with subaltern knowledge production and marginalized communities, and creating the field of comparative feminist urban research.

*Department of Environmental and Urban Change | York University | Academy of Social Sciences*



**Ue-Li Pen** is one of the most original and enterprising theoretical astrophysicists working today. He pioneered the rapidly growing field of 21-cm cosmology. His work culminated in Canada's preeminent astronomical achievements of the last decade, the CHIME and CHIME-FRB experiments, and led to new dedicated telescopes in China, South Africa and Brazil. More recently, his innovative use of cosmic plasma as a giant billion-kilometre-sized telescope spawned the new field of scintillometry.

*Canadian Institute for Theoretical Astrophysics | University of Toronto | Academy of Science*

**Ito Peng's** groundbreaking research on gender, care and migration policies and the global care economy established her as an internationally acknowledged thought leader on issues of gender equality, care work, transnational care migration, and the multidimensional and interlocking dependencies between the Global North and South through the work of care and the migration of care workers. Backgrounded by the pandemic, her work is now in critical demand.

*Department of Sociology | University of Toronto | Academy of Social Sciences*

**Satya Prakash** is a world-renowned scientist, entrepreneur, and innovator in the fields of microbiome, probiotics, artificial cells, targeted therapeutics delivery and next-generation cardiac stents. He discovered key links between the gut microbiome and metabolic diseases, as well as developed novel targeted drug and gene delivery platforms. His groundbreaking work on the role of the microbiome in disease has led to the world's first-of-its-kind health-promoting probiotic formulation that reduces blood cholesterol.

*Faculty of Medicine | McGill University | Academy of Science*

**Doina Precup** is noted for her fundamental contributions to reinforcement learning specifically for her contributions to temporal abstraction through the concept of options, the invention of the option-critic architecture, her pioneering work on bisimulation metrics and off-policy learning, her many theoretical and practical contributions to the development of RL algorithms and her contributions to the use of machine learning in medicine that have made a difference in practice.

*School of Computer Science | Mila | DeepMind | McGill University | Academy of Science*

**Judy Radul** is an award-winning and internationally renowned new media artist and scholar whose research investigates how technologies shape perceptions of reality. Her complex, large-scale installations provoke reflection on the nature of truth, power, and representation. Radul's practice has had a significant impact in the areas of legal aesthetics, representation and perception, and camera motion technology. Her many high-profile residencies, exhibitions, and scholarly contributions reflect her national and international profile.

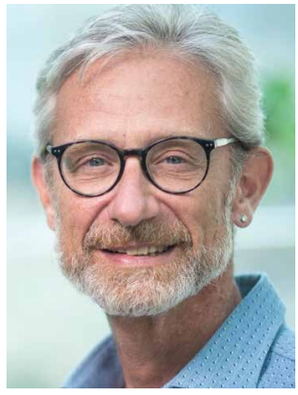
*School for the Contemporary Arts | Simon Fraser University | Academy of Arts and Humanities*

**Julie Rak** is a field leader in the study of autobiography and life writing in Canada and internationally. Her fierce commitment to socially-engaged research shifted the study of autobiography away from a focus on famous literary figures to writers and artists who are marginalized. The power and purpose of life stories across media, especially by those who have been excluded from the body politic because of their gender, race, class or sexual orientation, motivates her scholarship and her advocacy.

*Department of English and Film Studies | University of Alberta | Academy of Arts and Humanities*

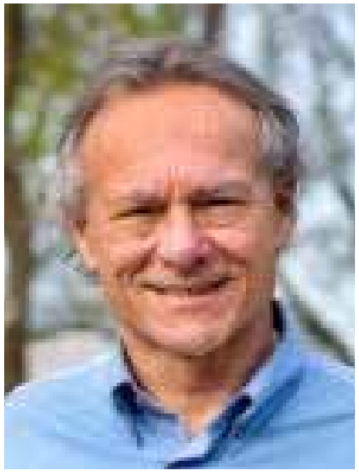
**Marc Rosen** has been a leader in the areas of energy, exergy, heat transfer, and thermofluids engineering throughout his career. His research, publications and industry partnerships have led to increased efficiency in traditional energy systems and improved alternative energy technologies, as well as a new understanding of how to meaningfully quantify sustainability. He has also had a tremendous impact on Canadian engineering through his leadership in academia and professional societies.

*Department of Mechanical and Manufacturing Engineering | Ontario Tech University | Academy of Science*



**Fabio Rossi's** innovative approaches to understand the cellular origins and differentiation capabilities of tissue resident cells have opened up new fields of research. His work is recognized internationally for providing new strategies to treat chronic degenerative diseases such as muscular dystrophy. His efforts in the Canadian and international regenerative medicine community have catalyzed the creation of new interdisciplinary research clusters and advanced Canadian leadership in this important health research area.

*School of Biomedical Engineering and Department of Medical Genetics | The University of British Columbia | Academy of Science*



**Edward Rubin** developed pioneering laboratory and computational technologies as part of the Human Genome Project, to sequence and analyze human chromosomes 5, 16 and 19. He then decoded these complex data, comparing DNA sequences between species to discover genes of pivotal evolutionary and biomedical importance. Throughout, Professor Rubin has generously shared his knowledge with Canadian scientists and been a champion of their research worldwide.

*Science Corps USA | Academy of Science*

**Jean Saint-Aubin** is a world-renowned expert whose creative work on the interface between short- and long-term memory representations has challenged conventional wisdom and opened the door to new conceptualizations. In addition, his work on reading, with its innovative eye movement-based approach, has opened a new field of study on parent-child reading.

*École de psychologie | Université de Moncton | Academy of Social Sciences*

**Mohamad Sawan** is an international authority on biomedical engineering. He is credited with several major breakthroughs, including chip-integrated implantable devices for the measurement and electrical stimulation of the visual cerebral cortex in order to restore sight to the blind, work that has received international recognition. His scientific contributions have been applied in a variety of specialties including audiology, urology, respirology, vision, epilepsy, and limb movement.

*Département de génie électrique | Polytechnique Montréal | Academy of Science*

**Margaret Schabas**, a leading scholar in the history and philosophy of economics, has published three important monographs: one on William Stanley Jevons and the transition of economics from a literary to a mathematical discipline, the second on the concept of "the economy" and the belief that it is governed by natural and social laws and, most recently, the first monograph on the economics of David Hume.

*Department of Philosophy | The University of British Columbia | Academy of Arts and Humanities*

**Stephen Scott** from Queen's University is a world leader in the computational, neural, mechanical and behavioural aspects of voluntary motor control. He invented Kinarm, interactive robotic technologies that provide unprecedented experimental control over arm motor function, which he has used to transform our understanding of the intimate link between cortical circuits and limb biomechanics. Kinarm robots are now widely used around the world to quantify brain function and dysfunction.

*Department of Biomedical and Molecular Sciences | Queen's University | Academy of Science*

**Charlene Senn** applies social psychological theory and conducts rigorous research to better understand violence against women and girls and possible solutions. Her novel approach and expansion of sexual assault resistance education for young women to include sexuality education has produced the only intervention proven to dramatically reduce sexual violence experienced by women students. Her ground-breaking work has changed what comprehensive sexual violence prevention means on campuses in Canada and beyond.

*Faculty of Arts and Social Sciences | University of Windsor | Academy of Social Sciences*

**Raymond Siemens** is Distinguished Professor at the University of Victoria, in English with cross-appointment in Computer Science. His research has revised our understanding of early English poetic tradition and has enriched the academic ecosystem by exploring, testing, and proving the value of emerging digital research, dissemination and collaborative engagement methods—advancing the important mission of the humanities within the academy and in the many communities that humanistic work serves.

*Faculty of Humanities | University of Victoria | Academy of Arts and Humanities*

**David Sinton** is an international leader in fluids- and energy-related research. He pioneered the field of microfluidics for energy applications and has developed fluid testing systems that improve the environmental and economic performance of energy operations. He has made significant breakthroughs in the utilization and storage of carbon dioxide and the electrocatalytic conversion of carbon dioxide into renewable fuels and chemicals.

*Department of Mechanical & Industrial Engineering | University of Toronto | Academy of Science*

**Janet Smylie** holds a Canada Research Chair in Advancing Generative Health Services for Indigenous Populations in Canada at the University of Toronto. Among Canada's first Métis physicians, she is globally respected by academics and Indigenous leaders for consistently producing and translating innovative research into tangible benefits for Indigenous communities. Dedicated to advancing equity in health services for Indigenous populations, her research program, Well Living House, is grounded in Indigenous community partnerships.

*Well Living House | Unity Health Toronto | Dalla Lana School of Public Health and Department of Family and Community Medicine | University of Toronto | Academy of Science*

**Susanne Soederberg** is a professor in Global Development Studies at Queen's University. She is an interdisciplinary researcher whose scholarship in political economy has advanced debates about debt, finance, and neoliberal governance across the global North/global South divide. Dr. Soederberg has written several award-winning books, including Corporate Power in Contemporary Capitalism (2010), Debtfare States and the Poverty Industry (2014), and Urban Displacements: Governing Surplus and Survival in Global Capitalism (2021).

*Department of Global Development Studies | Queen's University | Academy of Social Sciences*

**Igor Stagljar** is one of the world leaders in the field of proteomics/chemical genomics, developing technologies to facilitate the study of various human proteins involved in cancer. Additionally, his lab has recently made major contributions to the fight against COVID-19 by developing SATiN and Neu-SATiN serological tests. He has published over 150 research papers, is the holder of eight patents, and has been honored as one of the top inventors in Canada.

*Donnelly Centre, Departments of Molecular Genetics and Biochemistry | University of Toronto | Academy of Science*

**Kelli Stajduhar**, Professor, University of Victoria has worked in oncology, palliative care, and gerontology as a nurse, educator, and researcher. Her practice and research focuses on end-of-life, caregiving, and marginalized populations. Most recently, she was inducted as a Fellow into the Canadian Academy of Health Sciences and the Canadian Academy of Nursing. In 2021, she received the Tier 1 CRC in Palliative Approaches to Care in Aging and Community Health.

*School of Nursing | University of Victoria | Academy of Social Sciences*

**Wendy Steiner's** pathbreaking studies of word-and-image relations have influenced thinkers and artists worldwide. From the technicalities of verbal and visual semiotics to the pyrotechnics of the public intellectual, she has argued for freedom of expression and the centrality of beauty in human experience. Her concepts of the model and "beauty as interaction" advance a liberal, feminist aesthetics that also inspires her creative work as an opera librettist and installation artist.

*Faculty of Arts and Sciences | University of Pennsylvania | Academy of Arts and Humanities*

**Jonathan Sterne's** research is concerned with the cultural dimensions of communication technologies, especially their form and role in large-scale societies. In addition to his work on sound and music, he is known for his work on media history, new media, cultural theory and disability studies. His current projects consider instruments and signal processing; the intersections of disability, technology and perception; and the politics of artificial intelligence.

*Department of Art History and Communication Studies | McGill University | Academy of Arts and Humanities*

**Cynthia Sugars** is widely considered to have laid the groundwork for the field of Canadian settler-colonial literary studies within broader international debates. Her richly historicized analyses have shaped fundamental discussions about some of the most pressing issues of our time, such as Indigenous-settler relations, multiculturalism, national identity, and Canada's position in a global world. Her work has deepened our understanding of the ways that Canadians have both imagined and interrogated stories of national belonging.

*Department of English | University of Ottawa | Academy of Arts and Humanities*

**Christine Sypnowich** is an internationally renowned scholar who uses an interdisciplinary approach—spanning philosophy, law, politics, education, urban planning, and local history—to make a significant impact on political and legal philosophy. Her research revolves around the central tenet that philosophy should illuminate vexing questions of justice and equality, enhance self-understanding, and further human flourishing. Sypnowich's background in heritage activism bolsters her commitment to the relevance of political philosophy for public debate.

*Department of Philosophy | Queen's University | Academy of Arts and Humanities*

**Maite Taboada** is Distinguished SFU Professor in the Department of Linguistics and Director of the Discourse Processing Lab at Simon Fraser University. Professor Taboada's research combines insights from discourse analysis and computational linguistics to investigate and confront pressing societal issues. She has transformed the way information is understood and disseminated, developing tools to classify online comments and identify misinformation, and drawing attention to gender representation in the media.

*Department of Linguistics | Simon Fraser University | Academy of Arts and Humanities*

**Jean-Claude Tardif** is a cardiologist and scientist conducting basic, translational and clinical research on atherosclerotic cardiovascular disease. He has shown the benefits of inflammation reduction in coronary disease, which ultimately led to regulatory approval of colchicine for clinical use in large numbers of patients. He has also discovered the role of genetic determinants of responses to medications, as part of his pioneering inter-disciplinary work in cardiovascular precision medicine.

*Département de médecine | Institut de cardiologie de Montréal | Université de Montréal | Academy of Science*

**Sunera Thobani's** scholarship focuses on critical race and postcolonial theory and politics; intersectionality and social movements; colonialism, migration and violence; Islam, Gender and Muslims; and South Asian Gender & Sexuality Studies. Professor Thobani has served as Ruth Wynn Woodward Endowed Chair (SFU); President, National Action Committee on the Status of Women; and founding member, Researchers and Academics of Colour for Equity (RACE). She is a recipient of the Sarah Shorten (CAUT) and Dean's Excellence (UBC) Awards.

*Department of Asian Studies | The University of British Columbia | Academy of Social Sciences*

**Wen Tong** has made fundamental contributions to wireless communications system, information transmission, sensing, processing, computing and machine learning, terrestrial and satellite mobile networks, with a focus on their applications in 1G to 6G wireless, WiFi, smartphone and associated global standardizations. A fellow of Canadian Academy of Engineering and fellow of IEEE, he received the R.A. Fessenden Medal, and the IEEE Communications Society Distinguished Industry Leader Award.

*Huawei Canada | Academy of Science*

**Diane-Gabrielle Tremblay**, École des sciences de l'administration, Université TÉLUQ, is an internationally renowned expert in the socio-economics of work, who has developed innovative approaches to the institutionalist theory applied to the organization of work and work-family balance. She has applied them in research in partnership with various professional communities and has received several prestigious distinctions from scientific and professional associations.

*École des sciences de l'administration | Université TELUQ | Academy of Social Sciences*

**Sasha Tsenkova** is one of the world's prominent scholars in urbanism, focusing on the nexus of planning, design and policy. She is the leading authority in Canada on housing and planning policies in Eastern Europe, and an internationally recognised expert on comparative urban and housing research. Her innovative and impactful work on resilience focuses on housing and planning strategies to design sustainable, livable and equitable cities.

*School of Architecture, Planning and Landscape | University of Calgary | Academy of Social Sciences*

**Danika van Proosdij** is Director of TransCoastal Adaptations: Centre for Nature Based Solutions, professor at Saint Mary's University and Fellow of the Royal Canadian Geographical Society; studying how coastal systems respond to natural and human drivers of change, leveraging this understanding to integrate nature-based adaptation options in protection of coastal communities. She has over 25 years of applied ecosystem based coastal adaptation projects and vulnerability assessments in Canada and abroad.

*Department of Geography and Environmental Studies | Saint Mary's University | Academy of Social Sciences*

**Gordana Vunjak-Novakovic** is a pioneer of tissue engineering. She developed methods to grow functional bone, cartilage and heart muscle starting from patient cells and biomaterials scaffolds using bioreactor cultivation. She is recognized for impactful innovations in technologies to generate, understand and utilize functional human tissues, mentoring and supporting the next generation of diverse scientists and continuous support of Canadian research enterprise in tissue engineering and regenerative medicine.

*Departments of Biomedical Engineering, Medicine and Dental Medicine | Columbia University | Academy of Science*

**Virginia Walker** has been described as a renaissance biologist. Her scientific curiosity has resulted in investigations that focus on current problems affecting the next generation. Her scholarship is unique in its breadth and diversity, weaving together disciplines of genetics, molecular biology, chemistry and engineering. A prolific researcher with an international reputation, Dr. Walker is a pioneer in several fields linked by a common concern: coping strategies against environmental stress.

*Department of Biology and School of Environmental Studies | Queen's University | Academy of Science*

**Jennifer M. Welsh** (Canada 150 Research Chair in Global Governance and Security, McGill) is an internationally-renowned scholar and public intellectual of armed conflict, civilian protection, humanitarian action, and Canadian foreign policy. She co-founded the interdisciplinary Oxford Institute on Ethics, Law and Armed Conflict, served as Special Advisor to the UN Secretary General on the 'Responsibility to Protect', and currently co-directs a Canada-wide research network on Women Peace and Security. Welsh's award-winning work focuses on how international conflict management and humanitarian efforts can leverage and reinforce those of local actors. Throughout her career, she has built

bridges with national and international policymakers and nurtured a new generation of policy-engaged scholars on global security.

*Department of Political Science and Max Bell School of Public Policy | McGill University | Academy of Social Sciences*

**Jianhong Wu**, a renowned mathematician, has made foundational contributions to the global dynamics and bifurcation theory. His novel mathematical models have pioneered several research fields. His disease modelling research provides critical insights of mechanisms behind complex patterns and accurately forecasts disease trends. His leadership has profoundly contributed to the paradigm shift toward using interdisciplinary modelling extensively in health planning and firmly establishing Canada as a global leader in mathematical epidemiology.

*Faculty of Science | York University | Academy of Science*

# College Members

**Jordan Abel** is a queer Nisga'a writer from Vancouver. He is the author of *The Place of Scraps*, *Un/inhabited*, *Injun*, and *NISHGA*. Abel's next project, a work of fiction called *Empty Spaces* forthcoming from McClelland & Stewart in 2023. Dr. Abel is currently an Associate Professor in the Department of English and Film Studies at the University of Alberta.

*Department of English and Film Studies | University of Alberta | RSC College*

**Aisha Ahmad** is an internationally recognized and award-winning expert in International Security. Her research investigates the links between jihadist insurgents and criminal networks in war zones around the world. She is the author of the decorated book *Jihad & Co.: Black Markets and Islamist Power* (2017), and has conducted fieldwork in Afghanistan, Pakistan, Somalia, Mali, Iraq, and Lebanon. She has advised militaries, governments, and international organizations on critical global security concerns.

*Department of Political Science | University of Toronto, Scarborough | RSC College*

**Daniel Alessi** is an internationally recognized expert in applying the tools of environmental geochemistry and geomicrobiology to complex water, environmental, and green technology challenges. He is widely regarded as a leader in studying the water cycle in hydraulic fracturing, in modelling the cycling of elements in the environment, and in the development of remediation and sorbent technologies to selectively extract contaminants and resources from water and soil.

*Department of Earth and Atmospheric Sciences | University of Alberta | RSC College*

**Susan Andrews** is an internationally recognized scholar of East Asian religiosities whose research explores storytelling as both a record of lived religion and an engine of religious change. An expert in narrative, Andrews is an award-winning educator with a penchant for research-driven, campus–community partnerships that explore issues of immediate and lasting social significance, including representation and identity.

*Department of Religious Studies | Mount Allison University | RSC College*

**Jeffrey Ansloos** is the Canada Research Chair in Critical Studies in Indigenous Health and Social Action on Suicide. He is one of Canada's leading scholars addressing mental health and the high rates of suicide among Indigenous youth. Drawing on critical and community-engaged methodologies, Dr. Ansloos' work is advancing understanding of the social ecologies of suicide and innovative approaches to suicide prevention, mental health promotion, and social policy with Indigenous communities

*Ontario Institute for Studies in Education & the Department of Applied Psychology and Human Development | University of Toronto | RSC College*

**Nicolas Berthelot** is a clinical psychologist and a Professor at the Université du Québec à Trois-Rivières, and holds the Canada Research Chair in Developmental Trauma. He is an expert on the intergenerational trajectories of psychological trauma. He has proposed the concept of mentalization of trauma, an innovative approach in developmental and clinical psychology, and has developed the STEP program, a unique intervention aimed at intercepting the intergenerational transmission of abuse.

*Département des sciences infirmières | Université du Québec à Trois-Rivières | RSC College*

**Yvonne Bombard** is a Scientist at the Li Ka Shing Knowledge Institute, St. Michael's Hospital, Unity Health Toronto. She is internationally renowned for her scholarly contributions in the field of genomics health services, patient engagement and for her advocacy in genomics policy. Dr. Bombard's research assesses how genetic tests are applied in clinical practice. Her partnerships with academics and government have changed health policies, clinical guidelines and laws.

*Li Ka Shing Knowledge Institute | Unity Health Toronto | University of Toronto | RSC College*

**Sonja Boon** is an award-winning researcher, writer, and teacher whose work addresses the complex issues of migration, memory, gender, bodily experience, and identity, as these are lived and experienced. An inter- and multi-disciplinarian, Boon's scholarship has been lauded for its methodological innovation and its theoretical contributions. Her ground-breaking research has been praised as being "extraordinary", "valuable", and "critical" to gender studies and beyond.

*Department of Gender Studies | Memorial University of Newfoundland | RSC College*

**Abel Brodeur** is an Associate Professor in the Department of Economics at the University of Ottawa. He specializes in applied microeconomics, in the areas of development, health and labor economics. His current work aims to evaluate the socio-economic consequences of COVID-19 and examines the causes and consequences of hate crime, mass shootings and terrorism. He is the recipient of many distinctions and a co-editor of the Canadian Journal of Economics.

*Department of Economics | University of Ottawa | RSC College*

**Kimberley Brownlee** is the leading expert in two areas of moral and political philosophy: a) the philosophy of social human rights, loneliness, and belonging, and b) the ethics of conviction and civil disobedience. She is a Professor and Tier 1 Canada Research Chair at UBC and is inspiring a growing community of scholars to turn their collective attention to previously neglected problems concerning sociability, rights, and belonging.

*Department of Philosophy | The University of British Columbia | RSC College*

**Julia Christensen**, Canada Research Chair in Northern Governance and Public Policy, is an internationally recognized scholar in housing, home and health in the circumpolar North. Her scholarship is at the forefront of efforts to understand the northern housing crisis and dismantle it through community-led solutions. Her collaborations with Indigenous and regional governments have informed a series of policy initiatives that respond to the unique cultures and contexts of northern communities."

*Department of Geography and Planning | Queen's University | RSC College*

**Fiona Clement** is a Professor in the Department of Community Health Sciences at the University of Calgary with extensive expertise in Health Economics and Policy. With 147 publications, 54 government reports, 4960 citations, and an H-index of 40, she is a national leader in evidence-informed policy development. She is an international leader in the emerging field of Health Technology Reassessment that addresses optimal application of health technologies in healthcare.

*Community Health Sciences | University of Calgary | RSC College*

**Nicolas Cowan** is an associate professor and Canada Research Chair in Planetary Climate at McGill University. He uses telescopes on the ground and in space—and develops novel remote sensing techniques—to study the climates on extrasolar planets. In parallel, he combines geochemistry, geophysics, and atmospheric science to understand planetary habitability. These lines of research are converging on the search for habitable, and possibly inhabited, worlds orbiting nearby stars.

*Departments of Physics and Earth & Planetary Sciences | McGill University | RSC College*

As one of Canada's leading minds on Indigenous legal traditions and Aboriginal law, **Aimée Craft** of the University of Ottawa's Faculty of Law has devoted her career to deepening our understanding of Indigenous ways of knowing, while promoting truth, reconciliation and decolonization. Distinguished by its strong community-based focus, her research primarily explores Indigenous law related to protecting the earth and water, with a focus on Indigenous methods and collaboration.

*Faculty of Law | University of Ottawa | RSC College*

Using innovative methods, **Amila De Silva** has advanced the field of environmental contaminant chemistry. Dr. De Silva is a leader in contaminant fate and transport in the Canadian Arctic. Dr. De Silva applies findings on contaminants from the ecosystem level to global implications. Dr. De Silva's expertise has contributed to international and domestic policy on chemicals management in the context of environmental protection.

*Aquatic Contaminants Research Division | Environment and Climate Change Canada | RSC College*

**Véronique Dupéré** is an Associate Professor at the École de psychoéducation of the Université de Montréal (UdeM) and holds the Canada Research Chair on the Transition to Adulthood. She is also co-holder of the McConnell-UdeM Chair on Youth Knowledge Mobilization (Myriagone). Her work aims to support educational success and socio-professional integration during the transition from adolescence to adulthood, particularly among young people in precarious economic or educational situations.

*École de psychoéducation | Université de Montréal | RSC College*

**Jérôme Dupras** holds the Canada Research Chair in Ecological Economics and is an internationally recognized specialist in the socio-economic valuation of biodiversity. His work on socio-ecological modelling, natural infrastructures and environmental governance has been widely used by various stakeholders in civil society to build a new case in favour of nature conservation and to develop innovative land-use planning programs and policies.

*Département des sciences naturelles | Université du Québec en Outaouais | RSC College*

**Karen Foster** is an Associate Professor of Sociology and Canada Research Chair (Tier II) in Sustainable Rural Futures for Atlantic Canada at Dalhousie University. She is an enormously talented, productive and engaged scholar, whose scholarship on work, transitions in rural society, equity and public policy crosses many domains and disciplines. She combines that expertise with deep commitment and an extraordinary ability to engage meaningfully with local communities and policy makers.

*Department of Sociology and Social Anthropology | Dalhousie University | RSC College*

**Sheila Garland** is an internationally renowned clinical psychologist whose research bridges the areas of psychology, oncology, and sleep medicine. She applies sophisticated quantitative, qualitative, and patient-oriented research methods to improve the lives of people impacted by cancer. Her pioneering work on the influence that poor sleep has on cancer recovery, and the establishment of effective interventions, has improved the nights, and days, of cancer survivors worldwide.

*Department of Psychology | Memorial University of Newfoundland | RSC College*

**Tristan Glatard** is Canada Research Chair (Tier II) in Big Data Infrastructures for Neuroinformatics. He conducts world-class interdisciplinary research that uniquely combines computer science and neuroimaging. His research generates new tools and methods for more open, reproducible, and accessible science broadly speaking, and for neuroinformatics in particular.

*Department of Computer Science and Software Engineering | Concordia University | RSC College*

**Andrea Gonzalez** is a Tier II Canada Research Chair in Family Health and Preventive Interventions. Adopting a multi-method approach, her research focuses on the developmental consequences of adverse childhood experiences and intergenerational transmission. She has made major contributions in understanding and developing evidence-based approaches that reduce adversity in childhood, reverse their detrimental impact, and enhance the lives of children and families with far-reaching policy implications.

*Department of Psychiatry & Behavioural Neurosciences | McMaster University | RSC College*

**Benjamin Haibe-Kains** is an international leader in Bioinformatics—the development of computational methods based on statistics and machine learning to analyze large, complex biomedical data. His work is improving the prediction of disease progression and therapy response, cornerstones of precision medicine. He is a champion of transparent and reproducible research, exploring how cloud computing and software virtualization can improve the way data, analytical tools and findings are disseminated.

*Princess Margaret Cancer Centre, University Health Network & Medical Biophysics | University of Toronto | RSC College*

**Renée Hložek** of the University of Toronto is one of the world's leading young cosmologists. Her experimental and theoretical analyses of the cosmic microwave background and the largescale distribution of galaxies have illuminated the nature of dark matter, as well as the size, age, geometry, and mass-energy content of the universe.

*David A. Dunlap Department of Astronomy and Astrophysics & Dunlap Institute for Astronomy and Astrophysics | University of Toronto | RSC College*

**Nafissa Ismail** is the holder the Research Chair in 'Stress and Mental Health' at the University of Ottawa. She is interested in women's health and in the prevention of mental illnesses. She is known for her contributions to the identification of the biological pathways through which females become more sensitive to stress during adolescence and more vulnerable to psychological illnesses. Her work also demonstrates that the gut microbiota contributes to developing resilience to stress.

*École de psychologie | Faculté des sciences sociales | University of Ottawa | RSC College*

**Janelle Joseph** is Canada's leading scholar of critical studies in race and sports. She is renowned internationally for her interdisciplinary research promoting anti-racism and intersectional inclusion through sports, leisure, and physical activity. Her activist, diaspora, and embodiment work in Black communities is especially impactful. Recognized for the largest-ever study of anti-racism in university sport in Canada, her groundbreaking research has transformed sport, anti-racism policy, education, and practice in numerous national organizations.

*Faculty of Kinesiology and Physical Education | University of Toronto | RSC College*

**Angela Kaida**, Associate Professor and Canada Research Chair (Tier II) in Global Perspectives in HIV and Sexual and Reproductive Health in the Faculty of Health Sciences at Simon Fraser University (SFU), is a leading researcher in global health epidemiology. Her exemplary community-based research and masterful knowledge translation strategies confront health inequities and transform health research practice and services for women affected by HIV in Canada and HIV endemic countries.

*Faculty of Health Sciences | Simon Fraser University | RSC College*

**Manisha Kulkarni** conducts interdisciplinary and applied public health research on the socio-ecological determinants of vector-borne disease emergence and risk in global settings and directs the Global Health Program in the University of Ottawa's Faculty of Medicine. She is recognized internationally for her work on malaria and other vector-borne diseases which combines the fields of disease ecology, spatial epidemiology, and evaluation of vector control interventions to improve disease prevention and control.

*School of Epidemiology and Public Health | University of Ottawa | RSC College*

Professor in political communication at l'Université du Québec à Trois-Rivières, **Mireille Lalancette** is a leading scholar of social media in Canadian politics and about woman political leaders. She publishes with collaborators throughout North America and Europe. Her expertise is in demand among journalists and by political institutions, including the Assemblée nationale du Québec. Dr. Lalancette reaches broad audiences by publishing widely in French and English.

*Département de lettres et communication sociale | Université du Québec à Trois-Rivières | RSC College*

**Trevor Lantz**, University of Victoria, Environmental Studies. Dr. Lantz's interdisciplinary research program explores the causes and consequences of Arctic ecological change using remote sensing, finescale field studies, and collaboration with Indigenous experts. By identifying the factors that make some areas of the Arctic more susceptible to change, his research is making a meaningful contribution to northern decision-making and climate change adaptation.

*School of Environmental Studies | University of Victoria | RSC College*

**Charles Levkoe** is a Canada Research Chair in Equitable and Sustainable Food Systems and Director of the Sustainable Food Systems Lab. His community engaged research uses a food systems lens to better understand the importance of, and connections between social justice, ecological regeneration, regional economies, and active democratic engagement. Charles studies the evolution of civil society networks that view the right to food as an essential part of more just sustainable futures.

*Department of Health Sciences | Lakehead University | RSC College*

**Eric Li** is an Associate Profess and Principal's Research Chair (Tier 2) in Social Innovation for Health Equity and Food Security at the University of British Columbia – Okanagan Campus. His research employed an interdisciplinary and community-based approach to addressing wicked problems such as health inequity and food insecurity. He actively engages trainees at all levels (undergraduate to post-doctoral) to co-develop innovative and community-centered solutions and initiatives to tackle societal and system-wide challenges.

*Faculty of Management | The University of British Columbia – Okanagan | RSC College*

**Kristina R. Llewellyn** is one of Canada's leading scholars in history and education whose research tackles vital questions in teaching, oral history, and justice. Author and co-editor of four books, including Democracy's Angels: The Work of Women Teachers and the award-winning Oral History, Education, and Justice, she is a publicly engaged commentator on education issues, promoting nuanced understandings and practices of history, teaching, and learning for an equitable society.

*Department of Social Development Studies | University of Waterloo | RSC College*

**Aaron MacNeil** conducts transformative research that integrates theory and data from population ecology, social-science, and economics to understand how the sustenance of coastal ecosystems and small-scale fisheries are affected by multiple stressors, including climate change. His expertise in Bayesian statistics, facilitation, and decision theory have allowed him to effectively bridge scholarly gaps between the natural and social sciences and communication gaps between scholars and decision-makers.

*Department of Biology | Dalhousie University | RSC College*

**Sharmistha Mishra** is an epidemiologist and a Tier 2 Canada Research Chair in Mathematical Modeling and Program Science. Her research on disentangling sources of heterogeneity in the risks and spread of infectious diseases is grounded in the real-world implementation of public health programs. Her team examines transmission pathways structured by systemic inequities, and tests interventions tailored to disproportionate risks to inform public health and policy decisions in Canada and internationally.

*Department of Medicine | Unity Health Toronto | University of Toronto | RSC College*

**Robert Mizzi** holds a Tier 2 Canada Research Chair in Queer, Community and Diversity Education and is an incoming member of the International Adult and Continuing Education Hall of Fame. Dr. Mizzi's programme of research spans across adult and community education, educational administration, and social inclusion. His research primarily examines educational interventions that fosters respect for and understanding of two-spirit, lesbian, gay, bisexual, transgender, and queer people in organizations.

*Faculty of Education | University of Manitoba | RSC College*

**Jean-Frédéric Morin** is Full Professor of international relations at Université Laval and Canada Research Chair in International Political Economy. His research on policy coherence contributes to a better integration of health and environmental concerns in international trade deals. He has published 15 books and 57 peer-reviewed articles in political science, environmental sciences, economics, and law journals. His datasets on international treaties are widely used by researchers and treaty negotiators alike.

*Département de science politique | Université Laval | RSC College*

**Melanie Noel** holds the Killam Memorial Emerging Leader Chair and is an internationally renowned expert on children's acute and chronic pain. She applies a transdisciplinary, integrative approach to science that unifies methods across psychology, neuroscience, genomics, and medicine and is recognized for foundational research on children's pain memories and co-occurring trauma and pediatric chronic pain. She received numerous career awards including from the International Association for the Study of Pain.

*Faculty of Arts | University of Calgary | RSC College*

**Christoph Ortner** has made fundamental contributions to atomistic and multi-scale modelling and simulation and their applications in materials modelling. The span of his achievements, from sophisticated mathematical theory to computational physics and chemistry, enhance our understanding of such natural objects. His use of machine learning techniques is exemplary. Ortner's work is embodied in many highly cited publications and has been recognized through several international awards and editorial roles.

*Department of Mathematics | The University of British Columbia | RSC College*

**Arghya Paul** has made seminal contributions to the development of sustainable nanomaterials and nanocomposite hydrogels for diverse biomedical applications. Examples include genomic DNA-based injectable materials for localized drug delivery, mineral-based nanoparticles for bone repair, 3D-printed scaffolds for patient's anatomy-specific tissue regeneration, biomimetic hydrogel coatings to combat medical device-associated complications. His work has led to transformative medical innovations, including development of next-generation of bioactive stents and other surgical implants.

*Departments of Chemical and Biochemical Engineering and Chemistry | Western University | RSC College*

**Patricia Pelufo Silveira** is the scientific director of the Genomics and Epigenetics Pillar of the Ludmer Centre for Neuroinformatics & Mental Health, based at the Douglas Research Centre, and an associate professor at the Department of Psychiatry, Faculty of Medicine and Health Sciences at McGill University. She is a pediatrician specialized in Neonatal Follow Up and a neuroscientist.

*Department of Psychiatry | McGill University | RSC College*

**Sandra Rehan** is an international leader in the molecular ecology and behavioural genetics of bees. Rehan's research combines comparative genomics and socio-demography to provide critical insights into the diversity, decline and sustainability of wild bees. Rehan is advancing our understanding of the causes of wild bee declines by developing comprehensive wild bee population genomic and disease ecology models. These results will ultimately be used to implement critical conservation strategies.

*Department of Biology | York University | RSC College*

**Ervin Sejdić** is the Research Chair in Artificial Intelligence for Health Outcomes at North York General Hospital and an Associate Professor in The Edward S. Rogers Sr. Department of Electrical & Computer Engineering at the University of Toronto. He is a leader in the development of biomedical devices and the application of machine learning to better understand markers of disease, particularly as they relate to swallowing and gait.

*Edward S. Rogers Department of Electrical and Computer Engineering | University of Toronto | RSC College*

**Sapna Sharma** has transformed the understanding and study of how lakes worldwide respond to climate change, including rapid ice loss, warming water temperatures, degrading water quality, and changing fish distributions. She reinvigorated the field of winter limnology using big data and cutting-edge statistical analysis. She is a remarkable science communicator, generating millions of media impressions by clearly conveying complex research and as founder of SEEDS, an outreach program for refugees.

*Department of Biology | York University | RSC College*

**Emad Shihab** is Concordia University Research Chair in Data Analytics for Software Ecosystems. He is an award-winning, world-renowned leader in software engineering and software quality. He develops techniques that leverage machine learning to predict software change risk, identify and prioritize technical debt, and test mobile applications. His techniques and tools have been adopted by several major companies, including Microsoft, Avaya, National Bank of Canada, BlackBerry, and Ericsson.

*Department of Computer Science & Software Engineering | Concordia University | RSC College*

**Leyla Soleymani** is an Associate Professor in the Departments of Engineering Physics and Biomedical Engineering at McMaster and is an University Scholar and Canada Research Chair (Tier II) in Miniaturized Biomedical Devices. Dr. Soleymani's research is focused on developing biomedical technologies for rapid disease diagnostics and health monitoring, as well as solutions for reducing the spread of infectious diseases. Dr. Soleymani holds several patents in the areas of biosensing and biointerfaces with multiple diagnostics technologies licensed to pharmaceutical and biotechnology companies.

*Department of Engineering Physics | McMaster University | RSC College*

**Oliver Sonnentag**, the Canada Research Chair in Atmospheric Biogeosciences in High Latitudes, has developed an innovative research program at the interface of various disciplines in natural sciences, from biometeorology to ecophysiology and process-oriented ecosystem modelling. Well-integrated in national and international circumpolar research and synthesis initiatives, Sonnentag has made substantial contributions in improving our understanding of the impact of climate change and increasing anthropogenic pressures on northern Canada's vulnerable permafrost landscapes.

*Département de géographie | Université de Montréal | RSC College*

**Nathan Spreng** is a Professor of Neurology and Neurosurgery in the Faculty of Medicine and Health Sciences at McGill University and the Director of the Laboratory of Brain and Cognition at the Montreal Neurological Institute. Dr. Spreng's research focuses on the organization of large-scale brain networks and how dynamic interactions among brain regions support cognitive and social functioning across the lifespan, both in normal human aging and neurodegenerative diseases.

*Department of Neurology and Neurosurgery, Faculty of Medicine and Health Sciences | McGill University | RSC College*

A member of Carleton University's music faculty, **Jesse Stewart** is a composer, percussionist, artist, researcher, and educator. He has published widely on subjects including jazz, improvisation, hip hop, and experimental music, and he has been commissioned widely as a composer and artist. An active performer, he was honoured with the 2012 "Instrumental Album of the Year" Juno award for his work with genre-defying trio Stretch Orchestra.

*School for Studies in Art and Culture | Carleton University | RSC College*

**Debra Thompson**, Canada Research Chair in Racial Inequality in Democratic Societies, is an internationally recognized expert on the comparative politics of race. Her research focuses on the relationships among race, the state, public policy, and inequality in Canada and beyond. She is the author of the award-winning book, The Schematic State: Race, Transnationalism, and the Politics of the Census (2016) and The Long Road Home: On Blackness and Belonging (2022).

*Department of Political Science | McGill University | RSC College*

**Rowan Thomson** develops computational approaches for studying the interactions of radiation with matter and considers applications in radiation medicine, working with her team to improve radiation treatments for cancer. Her research results inform medical physics and radiation oncology practice internationally. She is the Canada Research Chair in Radiotherapy Physics. As Associate Dean (Equity, Diversity, and Inclusion), Thomson champions initiatives to make science more inclusive.

*Faculty of Science | Carleton University | RSC College*

**Xiuquan (Xander) Wang** is internationally recognized for his contribution to the understanding of regional climate change impacts through his pioneering work in high-resolution regional climate modeling, statistical downscaling, and urban flood modeling. His research results provide scientific foundations to support the smooth transition from symbolic climate crisis declarations to real climate actions and have been widely used by thousands of researchers, resources managers, and climate practitioners around the world.

*School of Climate Change and Adaptation | University of Prince Edward Island | RSC College*

More than 300 million people worldwide have major surgery every year. One in five suffer complications, and one in six never regain their usual level of function. **Duminda Wijeysundera** is a clinician-scientist at Unity Health Toronto. His research in the field of anesthesiology and perioperative medicine discovers new ways to prevent and treat complications after surgery. Dr. Wijeysundera uses his findings to help people recover from surgery more effectively.

*Department of Anesthesiology and Pain Medicine | Unity Health Toronto | University of Toronto | RSC College*

**Meghan Winters** is a CIHR Applied Public Health Research Chair in Gender and Sex in Healthy Cities. She is a population health researcher leading intersectoral scholarship to understand how city design impacts mobility, safety, and health, and also equity considerations within cities' policies and plans. She works with decision-makers and community groups at intersection of health, urban planning, and transportation to generate actionable evidence and tools to shape livable, sustainable, and equitable cities.

*Faculty of Health Sciences | Simon Fraser University | RSC College*

**Baiyu Helen Zhang**, Professor and Canada Research Chair in Coastal Environmental Engineering, has made significant advances in handling coastal oil and emerging contamination. Her work resulted in prestigious invitations from Canada's Ocean Protection Plan's Multi-Partner Oil Spill Research Initiative as lead scientist, and United Nations Development Program as senior scientific advisor. She received Fellowship in the Canadian Society for Civil Engineering in recognition of her impact on the discipline.

*Department of Civil Engineering | Memorial University of Newfoundland | RSC College*