Class of 2013
List of New Fellows

Division of Humanities

BAILEY, Gauvin Alexander – Department of Art, Queen’s University
Gauvin Bailey has developed the idea of global Renaissance and Baroque Art with foundational work on the hybrid cultures of colonial Latin America and Asia. His research compares geographic regions in new ways and uses multidisciplinary methodologies to contextualize art internationally. In 2010-2011 Bailey was awarded a Guggenheim Fellowship.

BATTISTE, Marie – Department of Educational Foundations, College of Education, University of Saskatchewan
Marie Battiste is a Mi’kmaw humanist whose expertise has been developed through research, speaking, and extensive publications in Indigenous languages, epistemologies, pedagogies, and decolonizing the academy. She has expanded Indigenous knowledge in disciplinarity and interdisciplinarity, providing a new foundation for an inclusive, respectful, and rigorous learning spirit within and beyond the Indigenous humanities.

BRADBURY, Bettina – Department of History, York University
Bradbury’s original contributions to feminist and family history in Canada and beyond have enriched those fields while making critical interventions in urban, legal, political and colonial history. Her award-winning books have deployed feminist analyses, quantitative and qualitative methods, and a rich range of primary sources to locate women and families at the heart of the industrial revolution, nineteenth century marriage and widowhood, and English and French uses of family law.

BROOK, Timothy – Department of History, The University of British Columbia
Timothy Brook is the outstanding historian of early modern China in the English-speaking world. His books on this subject have won numerous prizes and been translated into many languages. International historians like Jonathan Spence and Lisa Jardine have praised what Spence calls his “joyful and comprehensive scholarship.” A globally renowned Canadian Sinologist, Brook has also written important books about the politics of twentieth-century China.

HEATH, Joseph – Department of Philosophy, Centre for Ethics, School of Public Policy and Governance, University of Toronto
Joseph Heath is an international leader in political philosophy and the theory of rationality, as well as one of Canada’s leading public intellectuals. He has made fundamental contributions in two areas: to the understanding of the relations between rationality, morality, and culture, and to the foundations of business ethics.

LOCK, Frederick Peter – Department of English, Queen’s University
F.P. Lock is a leading authority on 18th century British literature, politics, and ideas. His two-volume biography of Edmund Burke has been acclaimed as the “definitive study” of the most intellectual of British politicians. With his distinctive marrying of primary research and interpretive acumen, Lock’s work is hailed for its sophisticated rhetorical and intellectual analysis, and for its attention to historical and cultural contexts.
PRADO, Carlos Gonzalez – Department of Philosophy, Queen’s University
Carlos Gonzalez Prado’s scholarly works have made substantial contributions both to bridging the analytic/continental divide in contemporary philosophy and to applied ethics. His publications on Michel Foucault have contributed enormously to demonstrating the relevance and significance of Foucault’s work for contemporary Anglo-American philosophy. His publications on suicide in dire medical circumstances have enlarged the debate about suicide to include its rationality as well as its ethical justification.

QUAYSON, Ato – Department of English, University of Toronto
Ato Quayson is internationally acknowledged as one of the most prolific, influential and innovative Africanists. His large body of work—5 single-authored monographs, 6 edited and co-edited collections, and over forty essays—extends from African Studies to other fields, including Disability Studies, Diaspora and Transnationalism Studies, Urban Studies, and Postcolonial Theory. He is Professor of English and founding Director of the Centre for Diaspora and Transnational Studies at the University of Toronto.

SHUBERT, Adrian – Department of History, York University
Known for pioneering new topics in Spanish history, Professor Adrian Shubert’s innovative interpretations of the country’s 19th and 20th centuries have produced a new paradigm, replacing arguments about Spanish exceptionalism and failure with one that emphasizes its full participation in a broader European pattern. His monographs and synthetic works, published in Spanish as well as in English, are recognized in Spain and around the world as ground breaking.

TAGLIAMONTE, Sali A. – Department of Linguistics, University of Toronto
Sali Tagliamonte’s rich and unique array of firsthand studies of language variation and change has played a major role in advancing the theory and techniques of Sociolinguistics worldwide. Her analyses of African-American varieties, British, Northern Irish and Canadian dialects, as well as child, teen, television, and internet language have galvanized a new generation of scholars. She is also the author of acclaimed monographs in Sociolinguistic research and methodology.

THOMPSON, Evan – Department of Philosophy, The University of British Columbia
Evan Thompson is a central figure in modern understandings of the nature of consciousness. His groundbreaking work brings perspectives from phenomenology, cognitive science, and Buddhism to bear on what has been described as the most difficult problem in the philosophy of mind.

WALKER, James W. St. G. – Department of History, University of Waterloo
James W. St. G. Walker is recognized internationally for his work on human rights and race relations. His scholarship and teaching on racial equality in Canada since World War II have influenced an entire generation of Canadians both within and outside the academy. His research helped launch African-Canadian history and aboriginal history as fields of historical inquiry. The historical lesson he emphasizes in his teaching, his scholarship and his voluntary activities is that “rights” are not a gift but a prize, something that citizens themselves have always had to initiate and preserve.

WEAVER, John C. – Department of History, McMaster University
Professor Weaver has written on many aspects of the social history of Canada and other countries. Studies of housing and crime in Canadian cities were followed by analyses of land acquisition and property rights in the New World colonies that resulted in his highly acclaimed book *The Great Land Rush and the Making of the Modern World 1650-1900* (2003). More recently, he has published on the subject of suicides.
CAMBRON, Micheline – Département des littératures de langue française, Université de Montréal
Micheline Cambron is an internationally renowned specialist in 19th and 20th century Quebec literature
and culture, as well as the work of Paul Ricoeur and Fernand Dumont. Her research examines utopia, the
press, and issues of literary history and the history of cultural life. Her work is distinguished by its
interdisciplinary openness and the heuristic role given to story.

DAUNAIS, Isabelle – Département de langue et littérature françaises, Université McGill
Isabelle Daunais is an internationally renowned specialist of the aesthetics of the modern novel (19th and
20th centuries). Her work on the nature of the Romanesque character, on memory specific to the art of
the novel, and novelists' reflections about their art is among the most innovative and pioneering in the
field. She is also known for her many studies on Flaubert and is considered a top specialist on him.

DÉRY, Louise – Galerie de l’UQÀM, Université du Québec à Montréal
Professor Louise Déry has managed the Galerie de l’UQÀM since 1997. A specialist in contemporary
Canadian and international art, she sets herself apart by her museum exhibitions in the field of
commissioning. She has executed more than 50 exhibitions accompanied by catalogues, in addition to
being the commissioner for Canada at the 2007 Venice Biennale. She has won numerous awards of excellence.

L’HOMME, Marie-Claude – Département de linguistique et de traduction, Université de Montréal
Marie-Claude L’Homme is a world-renowned researcher whose work on the fundamental nature of the
term has contributed to an in-depth study in the field of terminology. Her original approach to the
description of the term, based on lexical semantic models and allowing for an update of true lexical
networks, had attracted attention in fields as varied as linguistics, IT and lexicography.

MORENCY, Jean – Département d'études françaises, Université de Moncton
Université de Moncton Professor Jean Morency is a world-renowned specialist of the Americanism of
Quebec literature, and of the links existing between Quebec and American literature. His works also
examines cultural transfers and the adaptation of American esthetic models by Québécois, Acadian and
other French-Canadian writers. Jean Morency is currently studying the representation of traditional French Canada
in contemporary Quebec novels.

SAINT-MARTIN, Lori – Études littéraires, Université du Québec à Montréal
Lori Saint-Martin has acquired an enviable reputation as a literary critic, translator and writer. Her
feminist studies of Quebec literature have changed our understanding of classic texts and established new
points-of-view on contemporary culture. Her French-language translations of English-Canadian works
have contributed considerably to the dialog between both cultures, while her original works make her a remarkable
author.

DIVISION OF ARTS

BAXTER&, Iain – School of Visual Arts, University of Windsor
Iain Baxter& is Canada’s first conceptual artist & one of the world’s leading contemporary artists. He has
spent the last fifty years re-defining the Canadian & International art scene through cutting-edge
conceptual, ecological, technological & informational art projects. His many initiatives, including being
the founder of the N. E. Thing Co., have been recognized by multiple distinctions: four honorary doctorates,
induction to three orders, & three national prizes for lifetime achievements.
CAIRNS, Debra – Department of Music, University of Alberta
Debra Cairns’ extraordinary contributions to choral music over the past 23 years span the full spectrum of research and creative activity. An award-winning conductor and internationally published scholar, Dr. Cairns has received recognition in both the performance and academic domains through CD publications, national broadcast recordings and competition prizes with her chamber choir i Coristi, as well as articles, a scholarly edition of a Renaissance mass, and a book.

EAGLE, David – School of Creative and Performing Arts, University of Calgary
David Eagle is a leader in new music. His work is recognized for the beauty and virtuosity of his compelling and challenging voice. Major ensembles throughout the world perform his compositions and his contributions to sonic arts have influenced musicians, choreographers, and artists. He has collaborated with scientists in creating new instruments and actively promotes Canadian composers through New Works Calgary and the Happening Festival of New Music and Media.

UNDERHILL, Owen – Goldcorp Centre for the Arts, Simon Fraser University
Owen Underhill, Professor of Contemporary Arts at Simon Fraser University, is a respected Canadian composer/conductor, an inspirational music educator/mentor, and an influential cultural animator. He has composed over 70 works and conducted 175 premiere performances. He has been a leading force in shaping contemporary music culture on the West Coast as artistic director/programmer with Vancouver New Music and the Turning Point Ensemble. He has earned the title “CANADIAN MUSIC AMBASSADOR”.

Academy of Social Sciences

DIVISION OF SOCIAL SCIENCES

ADLER, Emanuel – Department of Political Science, University of Toronto
Emanuel Adler is one of the world’s foremost scholars of International Relations (IR). He is a leader of IR’s “constructivist” approach, which successfully challenged the field’s dominant paradigms, a program-builder, and a dedicated teacher and mentor. His scholarship is theoretically ambitious, empirically rigorous and intellectually pluralistic, which explains why he is among the three most widely-cited IR scholars in Canada.

ANTONY, Martin M. – Department of Psychology, Ryerson University
Martin Antony is a world leader in research on anxiety and related disorders whose work has garnered numerous awards for creating highly effective treatments. He has published 29 books and over 190 influential research papers and chapters, and has presented around the world. His best-selling self-help manuals are widely recommended for their evidence-based strategies. His research and teaching are based at Ryerson University, where he is the founding Director of the Master's and doctoral programs in Psychology. He is also past president of the Canadian Psychological Association and director of research at Canada's largest anxiety treatment centre, which he established.

BALA, Nicholas C. – Faculty of Law, Queen's University
Nicholas Bala is a family law scholar at Queen's University and internationally recognized expert on children and parents involved in the justice system. Uniquely interdisciplinary and collaborative, his work focuses on parents and vulnerable adults, including research on issues of spousal violence and access to family justice, and on the needs and rights of children and youth, including adolescent offenders, victims of abuse and those involved in high-conflict separations.
BENOIT, Cecilia – Department of Sociology, University of Victoria

Cecilia Benoit is an internationally renowned expert on midwifery, maternity care and the health of vulnerable populations, including Aboriginal women and families, adults in the sex industry and street-involved youth. Through her innovative, mixed research methodologies and highly-cited publications, she has contributed to a better understanding of how the law, gender inequality and stigmatization affects the health and safety of these populations, both in Canada and other countries.

BRITZMAN, Deborah – Faculty of Education, York University

Deborah Britzman, Distinguished Research Professor and practicing psychoanalyst, has revitalized the contribution that psychoanalysis is making to the study of teaching and learning. Among the most highly cited scholars working in the field of education today, Dr. Britzman’s award-winning books and essays are widely acclaimed for the depth of insight she has brought to the education of teachers. Her work’s originality and courage, as well as its eloquence and texture, its wit and helpfulness, are widely recognized as having advanced our understanding of what it means to learn.

BRUNNÉE, Jutta – Faculty of Law, University of Toronto

Jutta Brunnée is among the world’s most influential scholars in international environmental law, international law, and international legal theory. She has made ground-breaking contributions to the understanding of environmental treaty design, including lawmaking and compliance processes, and international climate change law. Her award-winning work on “interactional law” advances a novel theory of international legal obligation and offers profound new insights into how international law influences international actors.

FUDGE, Judy – Kent Law School, University of Kent

Judy Fudge’s interdisciplinary approach to labour law blends rigorous legal analysis with a sophisticated attention to social context. Her groundbreaking work on Canadian labour law history, the nexus between immigration and labour law, precarious work, gender and labour law, and labour rights as human rights has revitalized the field of labour law worldwide by providing an innovative approach to the regulation of work in contemporary labour markets.

GIDENGIL, Elisabeth – Department of Political Science, McGill University

Elisabeth Gidengil is an internationally recognized expert on electoral behavior and democratic engagement. Unquestionably among the most accomplished political scientists in Canada, she has also conducted pioneering research on the role of gender in politics, political communication, and media coverage of politics. She is the founder of the Centre for the Study of Democratic Citizenship and has served as president of the Canadian Political Science Association.

HENDERSON, James Youngblood – Native Law Centre of Canada, University of Saskatchewan

James (Sákéj) Youngblood Henderson is a leading Aboriginal legal scholar whose extensive research and advocacy on Aboriginal and treaty rights led to the constitutionalizing of these rights and to guide litigation. He helped generate Indigenous diplomacy in the UN system and the Declaration on the Rights of Indigenous people. His reliance on Indigenous knowledge and legal tradition has significantly influenced Canadian thought on creating trans-systemic methods to replace Eurocentrism.

LEVITIN, Daniel – Department of Psychology, McGill University

Daniel J. Levitin is recognized as a world leader in the psychology and neuroscience of music. He has made a number of vital and fundamental discoveries about the nature of musical memory, the neuroanatomical underpinnings of musical processing, and quantitative methods for analyzing musical data that have deeply influenced the field. In addition to his role as a rigorous scientist, he has had a profound impact on the public’s understanding of neuroscience, through numerous talks, public outreach programs, interviews, and best-selling books, demonstrating an unparalleled talent for communicating science in the public interest.
NEIS, Barbara – Department of Sociology, Memorial University of Newfoundland
Barbara Neis’ ground-breaking contributions to research and knowledge mobilization on the social and environmental issues facing coastal communities have had world-wide impact. She has helped explain why fish stocks collapse; shown how fishermen’s ecological knowledge can inform science and coastal governance; advanced our understanding of gender and fisheries; carried out community-engaged research on marine and coastal occupational health and is now studying the consequences of extended commuting for work.

O’CONNOR, Annette – Department of Epidemiology and Community Health, School of Nursing, University of Ottawa
Annette O’Connor’s novel measures, frameworks and interventions have contributed to the emergence of a new field of ‘shared medical decision making’. Her ground-breaking studies have created new knowledge, tools and standards for informing patients about difficult treatment decisions and have underpinned new policies and legislation internationally to promote shared decision making between patients and health professionals. Her leadership has been pivotal in creating an international academic forum for the field.

PECK, Jamie – Department of Geography, The University of British Columbia
Jamie Peck of is one of the most prolific and highly cited geographers in the world. His main contributions have been in labour studies, urban political economy, and critical policy analysis, including a long-term program of research on the free-market ideology of neoliberalism. Jamie Peck is a leading advocate for institutionally and spatially sensitive analysis across the social and economic sciences.

DIVISION DES SCIENCES SOCIALES

BOISMENU, Gérard – Département de science politique, Université de Montréal
Gérard Boismenu has excelled in teaching, research and administration (departments, centres, the faculty of arts and sciences, university presses and digital publishing). Equipped with a strong capacity for innovation in comparative research, he has opened new avenues into many themes: the Duplessis regime, federalism, and social regulation and protection. His contribution to knowledge has been acknowledged at home and abroad. He has led innovative projects in the publishing and distribution of scientific documents (Érudit, Synergies).

CARDINAL, Linda – Département de science politique, Université d’Ottawa
Linda Cardinal is an internationally renowned specialist who innovatively contributed to research into Canada’s Francophone minorities within Canadian and comparative politics. In debates on identity and linguistic policies, as well as in those on citizenship, institutions and governance, she has infused new life and given an international influence to research on Canada’s French-speaking communities.

CUSSON, Maurice – École de criminology, Université de Montréal
Maurice Cusson has pursued a career as a criminology professor at the Université de Montréal. He has written 12 books, three of which were award winning. He has adapted the theory of rational choice to the crime analysis. He has contributed to solving a series of poorly resolved problems in the field of criminology, namely the rationality of delinquents, effectiveness of social controls, dissuasion, growth of criminality, and the centuries-long decline of violence.

DUMONT, Serge – École de service social, Université Laval
Serge Dumont is internationally renowned as a pioneer in palliative care research. He is the co-founder of the first interdisciplinary research team into palliative care in Canada in 1997. His contribution revolves around the experience of families, in particular the emotional and financial burden they face, as well as the ethics issues surrounding end-of-life care.
GAUTHIER, Clermont – Département d’enseignement et d’apprentissage, Université Laval
Holding the Senior Canada Research Chair in Teacher training at Université Laval, Clermont Gauthier, is an international leader in the field. In the course of his career, he has published 41 books and over 200 articles in several languages. He has also presented more than 300 lectures in some twenty countries. His work has had a major impact on policies regarding the training of teachers in Canada and abroad.

Academy of Science

APPLIED SCIENCES AND ENGINEERING DIVISION

ABOURIZK, Simaan – Department of Civil and Environmental Engineering, University of Alberta
Dr. Simaan AbouRizk has significantly advanced the field of construction engineering, particularly construction simulation modeling and analysis. He is internationally acknowledged as a leader in project planning, productivity improvement, constructability, risk analysis and uncertainty modeling. His research represents a critical touchstone in the discipline, and he is a leader in his ability to transfer research and development into construction practice.

BENMOKRANE, Brahim – Département de génie civil, Université de Sherbrooke
Brahim Benmokrane, Professor at the Université de Sherbrooke, is an internationally renowned leader on the innovative use of advanced fibre-reinforced composite materials in construction. His pioneering research has produced ways to use fibreglass and carbon-fibre composites to replace steel in concrete structures, thereby eliminating the deterioration of urban infrastructure. Professor Benmokrane has developed innovative materials used worldwide. He is in demand worldwide as a lecturer for seminars and courses.

DJILALI, Nedjib – Department of Mechanical Engineering and Institute for Integrated Energy Systems, University of Victoria
Nedjib Djilali is an international leader in advanced computational modelling and clean energy technology. His influential scholarly work encompasses topics from aerodynamics and electrochemical energy conversion to water purification and crystal growth of semi-conductors. He is particularly renowned for pioneering computational fluid dynamics based fuel cell models, for addressing fundamental transport phenomena questions, and for the invention of novel fuel cell architectures. He has made major contributions towards a cleaner, more sustainable energy future.

JAIN, Praveen – Department of Electrical and Computer Engineering, Queen’s University
Praveen Jain is a professor of electrical and computer engineering at Queen’s University and the Tier I Canada Research Chair in Power Electronics – a scientific field to which he has made numerous original and substantial contributions. His most significant work is concerned with the advancement of high frequency power conversion technology for its use in the space, telecommunications, computer, induction melting and renewable energy industries.

KASHYAP, Raman – Department of Engineering Physics and Department of Electrical Engineering, École Polytechnique de Montréal
Raman Kashyap discovered the phenomenon of low power optical damage in optical fibres 25 years ago, which continues to significantly impact the safe operation of all present day optical networks, optical components and high power fibre lasers. His pioneering contributions and book on fibre Bragg gratings have influenced the technology and application in telecommunication and photonics around the world. He holds a Canada Research Chair in Photonics and a recipient the prestigious Killam Research Fellowship 2012-2014 for research on laser cooling of solids.
LEUNG, Victor C. M. – Department of Electrical and Computer Engineering, The University of British Columbia

Victor Leung is a world leader in research on wireless communication networks that enable tetherless exchange of information over the global telecommunication network anytime, anywhere, and unhindered by mobility. His pioneering work in developing novel architectures, protocols and management algorithms for wireless networks has influenced researchers worldwide. His research has advanced the adoption of wireless networks in the fields of healthcare, transportation and energy, for the betterment of society.

MUFTI, Aftab – Professor Emeritus, University of Manitoba

Aftab Mufti is among the pioneers in promoting the applications of advanced composite materials and sensors for civil infrastructure. The steel-free concrete bridge deck concept which he co-developed is recognized as one of the most innovative ideas of our time. Recipient of the Order of Canada, Dr. Mufti also introduced the concept of “civionics” which is now revolutionizing the practice of Structural Health Monitoring (SHM) of Civil Infrastructure.

EARTH, OCEAN, AND ATMOSPHERIC SCIENCES DIVISION

ABBATT, Jonathan – Department of Chemistry, University of Toronto

Jonathan Abbatt is recognized worldwide as a leader in atmospheric chemistry. He applies state-of-the-art experimental methods to study how aerosol particles promote cloud formation and interact with atmospheric gases, leading to improved model predictions of stratospheric ozone depletion, global and urban pollution, and climate change. His work bridges the atmospheric science and chemistry communities, and provides a firm foundation for quantitative assessments of societally-important environmental phenomena.

de VERNAL, Anne – Centre de recherche en géochimie et géodynamique GEOTOP & Département des sciences de la Terre et de l’atmosphère, Université du Québec à Montréal

Anne de Vernal has opened a new research field in marine geosciences, based on the use of organic-walled microfossil algae from deep-sea sedimentary archives, to reconstruct changes in temperature, salinity, sea-ice cover and productivity of high latitude oceans. Her work about the role of sea-ice cover in the climate/ocean dynamics at decadal-millennial time-scales of the recent geological past of the Earth, has been instrumental for international paleoclimate modeling efforts.

FRANK, Kenneth – Department of Fisheries and Oceans, Bedford Institute of Oceanography

Kenneth Frank’s research into the dynamics of marine fish populations and the ecosystems they inhabit has yielded important and revolutionary insights into their ecology and functioning. Consistently anchored within the framework of ecological theory his research has broad application in the ecological sciences, has stimulated re-examination of long held concepts, and has advanced the management of large marine ecosystems and the communities/species that inhabit them.

OLDENBURG, Douglas W. – Department of Earth, Ocean and Atmospheric Sciences, The University of British Columbia

Douglas W. Oldenburg is the world’s leading developer of geophysical inversion methods and software for quantitative interpretation of geophysical data acquired by the mineral industry and others to explore Earth’s shallow subsurface. The research by him and his co-workers has set the standard by which all similar developments are judged. His software is used by hundreds of scientists in industry and academia.

WOOD, Eric F. – Department of Civil and Environmental Engineering, Princeton University

For seminal contributions to the development of continental and global scale representations of land surface hydrology, and the development and use of remote sensing in hydrologic modeling and prediction.
**LIFE SCIENCES DIVISION**

**BELL, John – Department of Medicine and Biochemistry Microbiology and Immunology, University of Ottawa**

John Bell is an international leader in the development of “oncolytic viruses” for cancer therapy. Dr. Bell discovered that many viruses have a natural preference for infecting and killing cancer cells. Their studies have demonstrated that these viruses not only kill the cancer cells, but also stimulate the host to mount an aggressive anti-tumor response that takes over from the viruses to continue the fight against the cancer. There work has led directly to highly successful clinical trials that have established the efficacy of this new therapeutic paradigm.

**COLLINS, Stephen Michael – Department of Medicine, McMaster University**

Stephen Collins is a pre-eminent clinician-scientist who is recognized internationally for his work demonstrating interactions between intestinal bacteria, the gut, the immune system, and brain in the context of functional gastrointestinal disorders. His work generated novel conceptual and therapeutic approaches to these common but poorly understood disorders. He also established a unique research infrastructure in gastrointestinal research at McMaster University, including the globally recognized Farncombe Family Digestive Health Research Institute.

**HAMID, Qutayba – Meakins-Christie Laboratories, McGill University**

Qutayba Hamid is a clinical scientist that has focused most of his research in the area of the role of cytokines in allergic diseases. He pioneered the description of the association between Th-2 type cytokines and asthma and his work in the area has formed the basis for the generally accepted hypothesis of the pathogenesis of allergic disease. His contribution to this field has been translated to many therapeutic approaches that are currently in phase III trials including anti-IL-5, anti-IL-9 and IL-17. His papers are highly cited, more than 28000 times, and his H factor is 83.

**HERZOG, Walter – Human Performance Laboratory, Faculty of Kinesiology, University of Calgary**

Walter Herzog is the foremost expert in muscle biomechanics in the world. His innovative research has revolutionized our understanding of muscle contractility. His pioneering work on isolated sarcomeres demonstrated that force did not exclusively depend on actin-myosin overlap, as assumed for fifty years, but also depended critically on the structural protein titin. His pioneering research opened new fields, replaced long-held beliefs on contractility, and influenced clinical thinking on muscle function.

**HOBSON, Keith A. – Research Scientist, Environment Canada**

Keith Hobson is one of the world’s leading scientists in the field of isotope ecology. He has conducted pioneering and award winning research on the application of isotopic techniques to global animal migration and into food web and contaminant studies. His research on animal migration has resulted in new tools to track animal movement at global and regional scales, in order to solve scientific questions that were previously intractable with conventional mark-recapture methods. His scientific productivity of over 390 papers and a book, all within an 20-year period, is evidence of superior creativity, exceptional knowledge and dedicated work.

**HUMPHRIES, Richard Keith – Terry Fox Laboratory, BC Cancer Agency, The University of British Columbia**

Richard Keith Humphries is internationally recognized for his outstanding and pioneering contributions to elucidating the processes that allow blood stem cells to maintain their numbers throughout life and regenerate a new blood-forming system in transplanted recipients. He was in the vanguard of researchers delineating the critical role that HOX genes play in this process and how some alterations in the expression of HOX genes can cause leukemia whereas others can produce dramatic expansions of blood stem cells without transformation. He is also recognized as a scientific leader in viral-mediated gene transfer technologies and their use to create disease models and gene therapy strategies.
LANSDORP, Peter M. – Terry Fox Laboratory, BC Cancer Agency, The University of British Columbia

Peter Lansdorp is internationally renowned for his seminal discoveries about the developmental properties of blood-forming stem cells and the genetic mechanisms that regulate their aging. He invented novel methods for identifying and separating different populations of stem cells for clinical use. He also developed new techniques for imaging chromosome ends (telomeres) and sequencing DNA template strands in single cells.

LILLICRAP, David – Department of Pathology and Molecular Medicine, Queen’s University

David Lillicrap is an internationally-renowned leader in the field of Molecular Hemostasis. His research program, focused on the molecular characterization and genetic basis of hemophilia and von Willebrand disease (VWD), has led to innovative strategies for the diagnosis and treatment of the world’s most commonly-inherited bleeding diseases. His studies of hemophilia have developed and evaluated gene-based therapies for this classical recessive genetic trait, and he has made advances in characterizing the genetic mechanisms and pathobiology of VWD. Dr. Lillicrap’s novel findings, now being applied to clinical care worldwide, are improving the quality of life for patients with inherited bleeding disorders.

MARRIE, Thomas J. – Department of Medicine, Dalhousie University

Dr. Marrie is an internationally recognized and respected authority on infectious diseases, especially noted for contributions to the understanding and treatment of pneumonia. Dr. Marrie’s investigations and insights have had a major influence on the clinical approach to diagnosing and treating pneumonia. His research has been instrumental in the identification of novel infectious disease agents that cannot be cultured using conventional laboratory methods.

MARTENS, Patricia J. – Department of Community Health Sciences, Faculty of Medicine, University of Manitoba

Patricia Martens, Professor of Community Health Sciences, Director of the Manitoba Centre for Health Policy is an internationally-known researcher whose work on health equity, mental health, and health status/ healthcare use of Manitoba’s rural & northern residents, Aboriginal people, and children has impacted the health of Manitoba communities and beyond. A Member of the Order of Canada (2013), she has given over 400 presentations and published over 250 articles, books and abstracts.

PIERCE, Grant – Department of Physiology, University of Manitoba

Grant Pierce is considered one of the top cardiovascular scientists in the world. He has made major contributions towards the understanding of heart dysfunction in diabetes, the role of sodium-hydrogen exchange in ischemic heart disease and towards the prevention of cardiovascular disease through natural health products. His research, published in 200 manuscripts in high impact journals has been cited over 5000 times. He has authored/edited 8 textbooks. His services as Executive Director of Research at St. Boniface Hospital, Editor of the Canadian Journal of Physiology and Pharmacology, Chair of Peer Review for the Heart and Stroke Foundation of Canada and Scientific Director of the International Academy of Cardiovascular Sciences are but a few measures of his excellent leadership.

ROBAIRE, Bernard – Department of Pharmacology and Therapeutics, McGill University

Bernard Robaire is a world leader in the field of male reproduction. His studies on the impact on spermatogenesis of synergistic interactions between steroids are the basis for steroid male contraceptives. His pioneering studies of androgen action revealed the pathway by which androgens act rapidly on target cells. His groundbreaking research demonstrated that paternal aging and chemical exposures alter the quality of sperm chromatin and have adverse effects on offspring.
ROBERTS, Robert – President, Chief Executive Officer and Chief Scientific Officer, University of Ottawa Heart Institute
Robert Robert’s work has produced major advances in the fields of heart biochemistry, molecular biology and genetics. He developed important tests to assess heart damage in patients after a heart attack. In addition, he pioneered work defining gene mutations underlying very significant human cardiac diseases such as arrhythmias and atherosclerosis. His work is published in prestigious scientific journals and has been recognized internationally with numerous awards and honours.

SIMINOVITCH, Katherine – Department of Immunology, University of Toronto
Katherine Siminovitch’s discoveries of genetic and molecular pathways underpinning immunologic diseases have elucidated new paradigms of signal transduction and cell biology, illuminating the mechanisms whereby selected classes of signal transducing effectors link extracellular stimuli to cytoskeletal-driven cell responses or to the attenuation of cell responses required for homeostasis. Her discoveries of molecular pathways responsible for autoimmune disease have also profoundly advanced understanding and potential to ameliorate these common debilitating diseases.

STYS, Peter – Department of Clinical Neurosciences, University of Calgary
Peter Stys is a world leader in white matter disorders. His seminal contributions to our understanding of fundamental mechanisms of axo-glial injury include the key role of calcium influx into axons and release from stores; the expression of glutamate receptors on both axons and myelin; and the potent regulation of these receptors by copper, prion protein and Aβ. His systematic approach has broad relevance to many diseases such as stroke, neurotrauma, MS and Alzheimer’s disease. His experience as a practicing neurologist together with his engineering skills uniquely position him to continue making important discoveries which will have tremendous translational relevance.

SZYF, Moshe – Department of Pharmacology and Therapeutics, McGill University
Moshe Szyf has been a pioneer in the field of DNA methylation for the last three decades and was the first to propose a role for DNA methylation in human disease leading to new therapeutics and diagnostics. He pioneered the idea that the chemical coating of DNA (DNA methylation) links experience “nurture” and our genes “nature”, building a bridge over the fissure between the social and biological sciences.

WALSH, Patrick J. – Department of Biology, University of Ottawa
Patrick J. Walsh, currently President of the Canadian Society of Zoologists, is one of the world’s finest integrative animal biologists, his research spanning behaviour, physiology, biochemistry, genomics and toxicology. Best known for discoveries in fish nitrogen metabolism, his impact runs the gamut from evolutionary theory, the role of fish in the earth’s carbon economy, the integration of cellular acid-base regulation and metabolism, to interactions between the oceans and human health.

WALTER, Stephen – Department of Clinical Epidemiology and Biostatistics, McMaster University
Stephen Walter has an outstanding international reputation for his work in developing and applying statistical methods in biomedical research. His numerous publications have had particular impact in the evaluation of disease screening and diagnostic tests, in clinical trials, and through collaborations with clinical colleagues. Dr. Walter’s seminal contributions to research and innovations in epidemiology and clinical medicine rank him as one of the premier biostatistical scientists in Canada.
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MATHEMATICAL AND PHYSICAL SCIENCES DIVISION

AHO, Alfred Vaino – Department of Computer Science, Columbia University
Computer scientist Alfred Vaino Aho has made fundamental contributions to string searching, databases, formal languages, programming languages, compilation, and pattern matching. His research is used daily in millions of computers worldwide and has been cited thousands of times. He is the author of influential books in the analysis of algorithms and the theory of compilation.

EGERTON, Raymond F. – Department of Physics, University of Alberta
Ray Egerton’s pioneering work in Electron Energy Loss Spectroscopy has opened the field of quantitative electron microscopy and chemical analysis to probe the structure and chemistry of materials. His studies on electron inelastic scattering, quantitative analysis of spectra, electron-beam irradiation damage and spectrometers have contributed to the successful development of this technique widely used today. He is also the author of the classical reference book on this technique.

HUDLICKY, Tomas – Department of Chemistry, Brock University
Tomas Hudlicky, an early proponent of “green” chemistry, pioneered the use of biological methods in manufacturing medicinally important compounds. He developed efficient asymmetric syntheses of many pharmaceutically relevant targets (pancratistatin, morphine, Tamiflu, among others). He developed chemoenzymatic processes for recycling aromatic waste into useful materials, designed new processes for commercial analgesics, generated a family of new compounds with antiviral and anti-cancer properties, and won the prestigious Alfred Bader Award (2010).

JESSOP, Philip G. – Department of Chemistry, Queen’s University
Philip Jessop, internationally-recognized chemistry professor at Queen’s University, pioneered the field of homogeneous catalysis in supercritical fluids and invented “switchable solvents” – now fields of research being actively investigated around the world. His revolutionary contributions in the areas of catalysis, CO2 chemistry, and green solvents have resulted in technologies that address human needs while reducing environmental impact. Jessop has furthered the adoption of green technologies through his role at GreenCentre Canada.

MOONEY, Patricia M. – Department of Physics, Simon Fraser University
Patricia Mooney is a leader in the fields of materials physics and semiconductor characterization. Through the innovative use of forefront experimental methods, her groundbreaking studies of semiconductor defects have provided new insight into their fundamental properties, and lead to advances which have aided in the perfection and commercialization of important new information technologies. She has been a highly visible role model in international conference organization, and in professional society governance.

PANANGADEN, Prakash – Department of Computer Science, McGill University
Prakash Panangaden’s research career has spanned computer science, mathematics and physics. He has worked on programming languages, probabilistic systems, quantum computation and relativity. He is particularly known for deep connections between domain theory and continuous state Markov processes where he and his colleagues proved a striking logical characterization theorem. He and Keye Martin discovered a remarkable way to reconstruct spacetime topology from causal structure using mathematical ideas from programming languages.

PINFOLD, James L. – Physics Department, University of Alberta
James Pinfold is an internationally renowned particle physicist who was a leader in the discovery of the first hard evidence for Electroweak Unification and a founder of the ATLAS-LHC Experiment that has potentially discovered the Higgs boson. In the search for new physics beyond the Standard Model he was spokesman for an international collider experiment MODAL, co-spokesman for the SLIM astroparticle experiment, and now leads the newest LHC experiment, MoEDAL.
ROGERS, David William Oliver – Physics Department, Carleton University
A medical physicist, Rogers has had a significant international impact on cancer radiotherapy. By developing freely-distributed computer codes which are considered the gold standard, he stimulated the wide-spread use of Monte Carlo codes in medical physics. A specialist in the measurement of radiation, he championed a new dosimetry protocol based on absorbed dose primary standards. This protocol is now the standard for external beam radiotherapy treatments throughout North America.

WHITE, Mary Anne – Department of Chemistry, Dalhousie University
Mary Anne White is a world leader in experimental investigations of thermal properties of materials, at the overlap of chemistry, physics and materials science. Her contributions to the basic understanding of thermal conduction in solids and phase stability in complex systems have advanced science and led to new directions in applications such as more efficient thermoelectric materials and thermally erasable paper.

WILSON, Christine – Department of Physics and Astronomy, McMaster University
Christine Wilson is a world expert on the structure and evolution of star formation within galaxies. She has played distinguished roles in an ever-widening series of international research programs that reveal the complex structures of the Giant Molecular Clouds inside which all star formation takes place. Her prolific and deeply thought out work forms a key connection to understanding galaxy formation in the early universe.

YUDIN, Andrei K. – Department of Chemistry, University of Toronto
Andrei K. Yudin is an internationally renowned scholar who has created new molecules that serve as powerful tools used for chemical synthesis. His concept of “forced orthogonality” has enabled the development of entirely new classes of compounds, previously thought to be too unstable to be used as practical reagents. Yudin has also been active in translating these fundamental discoveries into applications that impact the fields of chemistry, biology and medicine.

Honorary Fellow

OBOMSAWIN, Alanis
A member of the Abenaki Nation, Alanis Obomsawin is one of Canada’s foremost documentary filmmakers and for some 40 years now, she has given voice to Canada’s aboriginal peoples. Her most recent work, Hi-Ho Mistahey!, tells the story of Shannen’s Dream, a national campaign asking that First Nations children have access to equal-opportunity education and safe as well as comfortable schools. It is a film about cultural identity, youth and hope. Alanis Obomsawin has directed 40 documentaries for the National Film Board, some of which have received numerous international awards, most notably Kanesatake – 270 ans de résistance (1993), a feature-length film about the Mohawk uprising of 1990 in Kanesatake and Oka, Québec.

Foreign Fellow

POZZAN, Tullio – Department of Biomedical Sciences, University of Padua
Tullio Pozzan, Professor, University of Padova, Italy. Dr. Pozzan’s pioneering research set the groundwork for our understanding of how cells regulate calcium concentrations within cellular compartments. His research demonstrated that changes in calcium concentrations impact cell signalling in both health and disease. He has developed new approaches that allowed to directly monitor, for the first time, the concentration of calcium ions in various locations within living cells.