

CLASS OF 2011
LIST OF NEW FELLOWS

ACADEMY OF THE ARTS AND HUMANITIES

DIVISION OF HUMANITIES:

BEHIELS, Michael - Department of History, University of Ottawa

Behiels is a leading authority on Canadian politics, federalism and constitutionalism. His multidisciplinary research on federal-provincial relations, constitutional renewal and human rights is used extensively.

DILWORTH, Tomas - Department of English Literature, University of Windsor

Tomas Dilworth is a Killam Fellow and winner of the British Council Prize in the Humanities, the foremost scholar on the poet and painter David Jones with publications on nineteenth and twentieth century British and American authors.

DOWBIGGIN, Ian R. - Department of History, University of Prince Edward Island

Among international scholars in the history of the health sciences, Ian Dowbiggin stands out as both an outstanding pioneer and a prolific researcher who has met the highest academic standards.

GERSON, Lloyd P. - Department of Philosophy, University of Toronto

Lloyd P. Gerson is one of Canada's most prolific and respected historians of philosophy. In his numerous monographs, articles and translations, he has sought especially to illuminate philosophy done in late antiquity.

GREER, Allan - Department of History, McGill University

Allan Greer is the leading English-language scholar of early Canada and Quebec. His work has led the way in opening up Canadian history to international currents and has brought a 'Northern' perspective to the study of colonial America.

HUNDERT, Gershon - Department of Jewish Studies, McGill University

Gershon Hundert is an internationally recognized leader in the study of Jewish history, particularly in East Central Europe. His groundbreaking scholarship has fundamentally revised historical narrative by its emphasis on the Polish-Lithuanian-Ukrainian context in which Jews lived.

KEYMER, Thomas - Department of English, University of Toronto

Thomas Keymer is an internationally renowned scholar of British literature and culture between 1600 and 1830. His publications have made ground-breaking contributions to eighteenth-century studies, the history and theory of narrative, and book history.

LIGHTMAN, Bernard - Department of Humanities, York University

Bernard Lightman is an internationally known historian of Victorian science and current editor of the journal *Isis*. His work on evolutionary naturalism and the popularization of science has informed critical new areas of scholarship.

NEMIROFF, Diana - Carleton University Art Gallery, Carleton University

As a curator and art gallery director, Diana Nemiroff's many exhibitions and research on contemporary art have made a significant contribution to the visual arts in Canada.

NEWMAN, John - Department of Linguistics, University of Alberta

John Newman has carried out a sustained program of research on core verbs of language, seeking motivation for linguistic structure in everyday human experience. In addition, he has contributed to research on diverse topics of Chinese and Southeast Asian linguistics.

NOVAK, David - Department for the Study of Religion, University of Toronto

David Novak is a leading Jewish philosopher today. His internationally recognized expertise is in natural law theory, Jewish-Christian relations, and biomedical ethics.

PENSLAR, Derek Jonathan - Department of History, University of Toronto

Derek Jonathan Penslar has achieved high international recognition for treating sensitive and controversial subjects - Zionism, the Arab-Israeli conflict, Jewish economic and political power, antisemitism - in rigorous, erudite, original & prolific scholarship.

RETALLACK, James - Department of History, University of Toronto

James Retallack of the University of Toronto is his generation's foremost historian of Germany's imperial era (1871-1918). With his prolific scholarship on the German Right and his pioneering research on Saxony, no one has done more to illuminate Germany's early struggles with democracy.

WATERSTON, Elizabeth - Department of English, University of Guelph

Elizabeth Waterston has contributed to Canadian culture as teacher, writer, editor, public speaker at home and abroad, and mentor to younger writers. She pioneered in inter-disciplinary studies and in the application of computer technology in studies in the Humanities.

DIVISION DES LETTRES ET SCIENCES HUMAINES:

LEFEBVRE, Solange - Faculty of Theology and Religion, Université de Montréal, Université de Montréal

An internationally recognized theologian and leading media personality, Solange Lefebvre has broken new ground in the consideration of human and social science methods, which has led to the publication of several innovative works on the relationships of generations, youth and their spiritualities, secularity, and religion in the public sphere.

MARTINEAU, France- Department of French, University of Ottawa

An internationally recognized researcher and two-time winner of the Major Collaborative Research Initiatives, the most prestigious SSHRC grant, France Martineau has laid the groundwork for the sociolinguistic history of French peoples in North America in contact situations.

MICHAUD, Ginette - Department of French Literature, Université de Montréal

A professor at the Université de Montréal and a member of the Séminaires de Jacques Derrida editorial committee, Ginette Michaud has distinguished herself through her work at the junction of literature, philosophy and psychoanalysis, and through her commitment in the intellectual community, both within Spirale magazine and in managing the Études françaises journal.

MORISSET, Lucie K. - Heritage Institut, Université du Québec à Montréal

A professor at the Université du Québec à Montréal, Lucie K. Morisset is a historian of architecture. Her work on urban development and heritage has had a meaningful impact on the built environment and has been reproduced in numerous disciplines by proposing a new understanding of the symbolic investments of the built landscape.

TRÉPANIÉ, Esther - Université du Québec à Montréal

Esther Trépanier conceptualized the subject of modernity in Quebec art from the inter-war period, highlighted the contribution of women to Quebec art, and those of Anglophone and Jewish artists to modern Montreal painting.

DIVISION OF ARTS:

DUNLOP, Rishma - Department of English and the Faculty of Education, York University

Award winning Canadian poet, playwright, essayist, translator, professor and literary scholar, Rishma Dunlop is a highly respected interdisciplinary polymath and published author. Among her many honours, she was recently awarded the Canada-U.S. Fulbright Research Chair in Creative Writing.

SELMAN, Jan - Department of Drama, University of Alberta

Jan Selman is a theatre director, dramaturg, editor and scholar who is recognized in Canada and internationally as a founder of the Popular Theatre Movement. Her research emerges from innovative practice. In her productive career, she investigates and develops ways of making theatre a potent agent of social change.

ACADEMY OF SOCIAL SCIENCES

DIVISION OF SOCIAL SCIENCES:

ARMSTRONG, Pat - Department of Sociology, York University

Pat Armstrong is an internationally renowned feminist sociologist and political economist. Her unique, original research on gender and work has had a major impact on Canadian public policy, as have her groundbreaking studies on the division of labour and quality of services in healthcare.

BAKKER, Isabella - Department of Political Science, York University

Isabella Bakker has forged an international reputation as a global intellectual leader, a superb teacher and an outstanding role model. Much of her work in global development, macroeconomics and public finance has been well ahead of its time, helping to create a new paradigm for understanding national and global economic issues and policies in ways more sensitive to questions of gender and social justice.

BARNES, Trevor - Department of Geography, The University of British Columbia

Trevor Barnes is an economic geographer who has worked across the spectrum of topics that defines his field: abstract mathematical modelling, empirical case studies of natural resource regions, urban-based industrial analyses, and the history, methods and philosophy of the discipline.

BRUDNER, Alan - Faculty of Law and Department of Political Science, University of Toronto

Alan Brudner is a distinguished philosopher. His aim of elaborating an Hegelian account of private and public law has materialized in three acclaimed books and in numerous influential articles.

KLEIN, Raymond Merbaum - Department of Psychology, Dalhousie University

In the field of cognitive psychology, Raymond Merbaum Klein, a dedicated advocate, collaborator and mentor, is internationally recognized for his methodological, empirical and theoretical contributions to our understanding of human attention.

KNIGHT, W. Andy - Department of Political Science, University of Alberta

Dr. W. Andy Knight is a world leader in the study of international organizations, global governance and human security. His extra-ordinary academic career is distinguished by prolific and innovative research and a remarkable record of public engagement in Canada and abroad.

KOBAYASHI, Audrey - Department of Geography, Queen's University

Audrey Kobayashi is a leading theorist in the discipline of geography with major contributions on racism, gender, and spatial theories. Her work on equity, human rights, immigration, citizenship, disability, and cultural identity has had an important influence in shaping public policy in Canada.

MANDERSON, Desmond - Faculty of Law, McGill University

Desmond Manderson brings law and the humanities into a rich interdisciplinary dialogue through unique and imaginative studies, both historical and contemporary. These explore contemporary issues in law and justice through literature, music, and the arts. Law emerges in a dynamic relationship with the images and discourses of the society in which it lives.

PAULY, Louis W. - Department of Political Science and Munk School of Global Affairs, University of Toronto

Louis W. Pauly is a distinguished leader in the field of international political economy. His influential and original research focuses on the increasingly complex interaction between globally integrating capital markets and local systems of legitimate and effective governance.

PRATT, Geraldine - Department of Geography, The University of British Columbia

Geraldine Pratt has transformed our understanding of women's working lives in modern Canadian cities. One of the founding architects of feminist geography, she has a long-term commitment to public engagement, through community-based research with immigrant women and by translating scholarly knowledge into theatrical performance.

DIVISION DES SCIENCES SOCIALES:

BERNIER, Bernard - Department of anthropology, Université de Montréal

Bernard Bernier has carried out most of his research in Japan on topics mainly relating to the economy and work. He has endeavoured to conceive of the Japanese economy in its greater sociocultural context and dismantle the vision of a homogenous Japanese society.

LE BOURDAIS, Céline - Département de sociologie, McGill University

An internationally renowned demographer, Céline Le Bourdais has carried out innovative research on families, which has enriched public debate and informed decision making. She has also made tremendous contributions to the development of social statistics in Canada.

MC ANDREW, Marie - Centre d'études ethniques des universités montréalaises, Université de Montréal

Professor Mc Andrew has contributed significantly to the understanding of the role of education in processing technical reports and identifying the most effective policies, programs and interventions for this purpose, in a comparative Canadian and international context.

VALLERAND, Robert J. - Department of psychology, Université du Québec à Montréal
Professor Robert J. Vallerand is internationally known for his work on motivational process. He has advanced the science of motivation, especially with regard to intrinsic motivation as well as passion toward activities.

VANDENBERGHE, Christian - Management Education Service, HEC Montréal
Christian Vandenberghe has acquired international recognition for his research on employee commitment in an organization. His work has covered the temporal dynamic of the commitment, its determinants, and its effects on retention.

ACADEMY OF SCIENCE

DIVISION OF APPLIED SCIENCES AND ENGINEERING:

AMON, Cristina - Faculty of Applied Science and Engineering, University of Toronto

For pioneering contributions to CFD algorithms, concurrent thermal designs, innovations in electronics cooling and nano-scale transport in semi-conductors and biological systems.

BANTHIA, Nemkumar- Civil Engineering Department, The University of British Columbia

Nemkumar Banthia is a Canada research Chair in Infrastructure Rehabilitation and a leading international expert on structural health monitoring, strengthening for seismic, blast and other catastrophic events and low carbon footprint construction materials. One of the most cited in the field, Dr. Banthia's research has enhanced the safety and sustainability of civil infrastructure all over the world.

BIRSS, Viola - Department of Chemistry, University of Calgary

Viola Birss is an international leader in electrochemical materials science. She has made highly significant contributions to the deposition of useful oxide films on metal surfaces, the synthesis and application of nanoparticles, and in enhancing the performance of fuel cells.

COLLINS, Michael P. - Department of Civil Engineering, University of Toronto

Michael P. Collins is a structural engineer whose research concerns the basic shear transfer mechanisms of reinforced concrete under extreme loads. His research has improved the safety of buildings, bridges, nuclear containment structures and offshore oil platforms.

JORDAAN, Ian - Faculty of Engineering and Applied Science, Memorial University of Newfoundland

Ian Jordaan is a pre-eminent Canadian engineer working on design of offshore structures in harsh environments. His work is founded on a deep and discerning knowledge of probability and mechanics. He has pioneered the risk-based approach to offshore engineering and estimation of structural loads caused by ice.

PARK, Chul B. - Department of Mechanical & Industrial Engineering, University of Toronto

Chul B. Park, world leader in plastic foaming, identified fundamental mechanisms of cell nucleation and growth of polymer foams and developed foaming technologies that significantly improve plastic products, reduce manufacturing costs and replace ozone-depleting blowing agents with inert gases.

PELTON, Robert Herbert - Department of Chemical Engineering, McMaster University

Robert Pelton is a professor of Chemical Engineering at McMaster University with research interests in polymers colloids and pathogen detecting paper. He is most known for inventing "smart microgels" and for establishing the *SENTINEL* Bioactive Paper network.

STANGEBY, Peter C. - Institute for Aerospace Studies, University of Toronto

Peter Stangeby is internationally recognized as the leading authority on most aspects of the boundary physics of magnetic fusion energy research devices. His standing is due to his seminal scientific findings and his graduated students who occupy key positions in the major international fusion research projects.

DIVISION OF EARTH, OCEAN AND ATMOSPHERIC SCIENCES:

BOUDREAU, Bernard Paul - Department of Oceanography, Dalhousie University

Bernard Paul Boudreau has contributed to our understanding of the changes that occur in marine sediments after their deposition and the use of mathematical models to describe the biological, chemical and physical processes that cause these alterations.

CANIL, Dante - School of Earth and Ocean Sciences, University of Victoria

Dante Canil is an international leader in the study of the Earth's mantle. He has pioneered innovative research in the Earth Sciences that has revolutionized our current understanding of kimberlites, craton formation, mantle oxidation and diamonds. He is the author of numerous highly-cited research articles together with a seminal chapter in Treatise in Geochemistry.

DESJARDINS, Raymond L. - Research Branch, Agriculture and Agri-Food Canada

Raymond L. Desjardins is an internationally renowned expert in quantifying carbon dioxide and trace gas exchange between the atmosphere and the terrestrial biosphere using tower and aircraft-based systems and models. He was co-recipient of the Nobel Prize with the IPCC and was influential in Canada's successful bid to include biological sinks in the Kyoto protocol.

HATTORI, Keiko - Department of Earth Sciences, University of Ottawa

Keiko Hattori is a leading geochemist who has made seminal contributions to our understanding of Earth's atmospheric and mantle evolution, the formation of arc volcanoes, and the generation of metal-fertile volcanic arcs. She has applied this fundamental knowledge to elucidate the origins and locations of mineral deposits.

DIVISION OF LIFE SCIENCES:

ANDERMANN, Frederick - Epilepsy Clinic, Montreal Neurological Institute and Hospital, McGill University

A neurologist and pediatric neurologist, he has specialized in the investigation of people with epilepsy and their treatment.

BERNATCHEZ, Louis – Department of Biology, Université Laval

In recognition of the exceptional contributions that Louis Bernatchez has made to the fields of biodiversity conservation, origin of species, and applied evolution.

FEDORAK, Richard N. - Division of Gastroenterology, University of Alberta

Dr. Richard N. Fedorak is an international leader in inflammatory bowel disease research. He has made seminal contributions in delineating the physiologic role of gastrointestinal epithelial injury and repair and has utilized these findings to lead international bench to bedside clinical research initiatives.

FRANCO, Eduardo L. - Department of Oncology, McGill University

An internationally renowned cancer epidemiologist, Eduardo L. Franco has helped to identify human papillomavirus infection as the cause of cervical cancer. His studies of vaccination and screening have led to new approaches in preventing this disease, a major public health problem in developing countries.

HALL, Judith G. - Department of Medical Genetics and Pediatrics, The University of British Columbia

Judith G. Hall is a clinical geneticist who has worked on birth defects and non-traditional mechanisms of disease.

JONES, Steven J. M. - Genome Sciences Centre, BC Cancer Agency

Steven J.M. Jones has made leading contributions to the field of genome informatics and has participated in numerous international genome projects. He has applied similar techniques to study human cancers providing insights into the process of oncogenesis and how cancer treatment can be personalized.

KEELING, Patrick John - Botany Department, The University of British Columbia

Patrick John Keeling studies early evolution of complex cells. His research combines exploration of natural diversity with molecular biology and genomics to understand fundamental processes such as metabolism, symbiosis, and gene exchange.

KRAMER, Michael S. - Department of Pediatrics and of Epidemiology, McGill University

Michael S. Kramer is a distinguished perinatal and pediatric epidemiologist whose research on infant feeding and adverse pregnancy outcomes has had important impacts on clinical practice and public health policy.

LANG, Anthony E. - Movement Disorders Unit, Toronto Western Hospital, University of Toronto

Anthony E. Lang is internationally renowned for his clinical and research work in the fields of Parkinson's disease and other Movement Disorders. Between 2001 and 2010 he was the most-cited author in the world in Parkinson's disease.

LEUNG, Peter Chung Kwor - Department of Obstetrics & Gynecology, The University of British Columbia

Peter Leung's discovery and characterization of the human gene encoding the gonadotropin-releasing hormone receptor is internationally acclaimed. His innovative research has had a profound impact on our understanding of the normal and disease mechanisms important for women's reproductive health.

MADDISON, Wayne P. - Department of Zoology & Department of Botany, The University of British Columbia

Wayne P. Maddison has contributed to our conceptual and analytical framework for extracting insights about evolution from life's genetic history, through theory and computational tools.

MULLER, William J. - Department of Biochemistry and Rosalind and Morris Goodman Cancer Research Centre, McGill University

William J. Muller is currently Professor in Departments of Biochemistry and Medicine at McGill University. Dr. Muller is recognized as one of the leaders in the development of transgenic mouse models of human breast cancer. In recognition of his important contributions to the development and characterization of these transgenic mouse models of human breast cancer, Muller were recently awarded a CRC Chair in Molecular Oncology at McGill University.

PETRIDES, Michael - Neuropsychology/Cognitive Neuroscience Unit, McGill University

Michael Petrides has provided us with new ways to conceptualize the role of the prefrontal cortex in cognitive processing and one of the most influential models of the anatomo-functional organization of the lateral frontal cortex. His discovery of the cytoarchitectonic homologue of Broca's language area in the monkey is having a major impact on conceptions of the evolution of language circuitry in the primate brain.

RUTKA, James T.- Division of Neurosurgery, The Hospital for Sick Children, University of Toronto

James T. Rutka is a neurosurgeon and scientist with keen interests in the molecular biology of human brain tumors. He has published over 300 peer reviewed articles, and received over \$10 million research funding.

SHAPIRO, Andrew Mark James - Clinical Islet Transplant Program, University of Alberta

Andrew Mark James Shapiro developed a new cell transplant procedure, the 'Edmonton Protocol' that has allowed patients with Type 1 Diabetes to discontinue insulin therapy - a remarkable achievement.

SICHERI, Frank - Samuel Lunenfeld Research Institute, Mount Sinai Hospital, University of Toronto

Frank Sicheri uses x-ray crystallography to understand how signaling proteins compose communication pathways in the cell and how the dysregulation of signaling proteins contributes to human disease.

THOMSON, James D. - Department of Ecology and Evolutionary Biology, University of Toronto

James D. Thomson has investigated pollination biology and pollinator behavior from novel perspectives. Notably, his models and measurements of the fates of pollen grains explain phenomena that are not treated in other bodies of theory.

WEINER, Joel H. - Department of Biochemistry, University of Alberta

Joel H. Weiner had made many contributions to our understanding of the expression, structure, assembly and function of membrane proteins with emphasis on proteins involved in energy conservation. He discovered new pathways for the secretion of proteins across bacterial membranes.

MATHEMATICAL AND PHYSICAL SCIENCES DIVISION:

KUDLA, Stephen S. - Department of Mathematics, University of Toronto

Steph S. Kudla is an international leader in the field of automorphic forms and arithmetic geometry. His research continues the development of the arithmetic theory of quadratic forms and theta functions, a subject that has deep historical roots. His work has had a wide impact on the study of special values of L-functions and their derivatives, a topic of central importance in modern number theory.

MABURY, Scott - Department of Chemistry, University of Toronto

Scott Mabury and his students have discovered five new classes of fluorinated chemical pollutants. Laboratory and field experiments, measuring their physical, chemical, and biological properties, lead to widely cited theories about the contamination particularly of mammals in the remote Arctic environment and in humans primarily in the industrial economies. They explored the "indirect" route whereby commonly used fluorinated materials escape and are transported and transformed through environmental reactions into the highly persistent and bioaccumulative perfluorinated acids so widely observed globally. The Mabury work has resulted in an explosion of research internationally in this area and influenced industry and regulators to move towards safer processes and more benign chemistries for use in consumer and industrial materials.

MILLER, Renée J. - Department of Computer Science, University of Toronto

Renée J. Miller is world-renowned as a pioneer in the field of Database Systems. Her work has focused on the long-standing open problem of data integration. Her profile is unique in that it combines gracefully theoretical elegance, with industrial impact, reflected by successful industrial products.

NAVARRO, Julio F. - Department of Physics and Astronomy, University of Victoria

Julio F. Navarro is one of the world's leading cosmologists. His work on the mysterious dark matter that holds galaxies together has helped to establish our current paradigm for the origin of structure in the universe.

NAZAR, Linda Faye - Department of Chemistry, University of Waterloo

A scholar of international stature in solid state electrochemistry, Linda Faye Nazar has distinguished herself as a leading authority on advanced materials for electrochemical energy storage and conversion. Her seminal research on Li-ion and Li-sulfur batteries has been described as "ground breaking and transformational".

NOLAN, Steven Patrick - EaStCHEM School of Chemistry, University of St-Andrews

Steven P. Nolan is distinguished for numerous contributions to organic, inorganic and organometallic chemistry, and in particular for his development of new homogeneous catalysts.

STINSON, Douglas Robert - David R. Cheriton School of Computer Science, University of Waterloo

Douglas Robert Stinson is an internationally renowned researcher in the fields of cryptography, combinatorics and their interaction. He is a pioneer in combinatorial cryptography and the author of over 300 research publications.

SUMMERS, Danny - Department of Mathematics and Statistics, Memorial University of Newfoundland

Danny Summers is an internationally recognized space physicist. His extensive works have proved instrumental in understanding the Van Allen radiation belts that surround the Earth. Summers theoretical work on plasma waves has wide application in space, planetary and astrophysical plasma.

VAN OORSCHOT, Paul - School of Computer Science, Carleton University

Paul Van Oorschot is an international leader in computer security and applied cryptography. He has made contributions spanning cryptographic theory to software security and industrial applications. He currently leads Canada's university research network in Internet security, NSERC, ISSNET.

FOREIGN FELLOWS

SOCIAL SCIENCES DIVISION:

TORRES, Carlos Alberto - Graduate School of Education and Information Studies, UCLA

Carlos Alberto Torres is considered one of the leading critical theorists in Education in the world and the foremost expert on the political philosophy of Paulo Freire.

MATHEMATICAL AND PHYSICAL SCIENCES DIVISION:

NIRENBERG, Louis - Department of Mathematics, Courant Institute of Mathematical Sciences, New York University

Louis Nirenberg has made fundamental contributions in mathematics, in particular, in "partial equations", with applications in geometry complex analysis and fluid flow.

HONORARY FELLOW

IRVING, Sandra

Sandra Irving is a tireless champion of education, research, her community and opportunities for our youth. She has always preferred to work quietly and away from the limelight. One would be hard pressed to identify anyone who has done more for education and her community than Sandra Irving. She is currently Chair of the President's Advisory Council of RSC - the Academies and Co-Chair of its Extending Excellence Fundraising Campaign.