RSC SRC

The Academies of Arts, Humanities and Sciences of Canada
Les Académies des arts, des lettres et des sciences du Canada

2006 New Fellow Citations
Notices académiques des membres élus en 2006

ACADEMY OF THE ARTS AND HUMANITIES
ACADÉMIE DES ARTS, DES LETTRES ET DES SCIENCES HUMAINES

Division of Humanities

BEWELL, Alan – Department of English, University of Toronto
Canada's leading multi-disciplinary scholar of British Romanticism, Alan Bewell has broken new intellectual ground through his unified approach to knowledge. His international reputation, recognized by the awarding of major research grants and prizes, appointment to the advisory boards of professional organizations, and invitations to lecture worldwide, rests on three exceptional qualities in his work--originality, breadth, and contemporary relevance.

HART, Jonathan – Department of English and Comparative Literature, University of Alberta
Jonathan Hart's 1992 book on Shakespeare's history plays, *Theater and World*, strikingly combined the disciplines of English and history, in each of which he has doctorates. His book on Northrop Frye confirmed his mastery of literary theory, and, in a recent series of three books on the New World, he combines exacting archival research with close literary analysis of documents in several languages and presents a daring and original vision of the colonization of one continent by another.

KRÖLLER, Eva-Marie – Department of English, The University of British Columbia
Eva-Marie Kröller is a leading scholar in the field of Canadian Literature who is recognized internationally for her innovative critical inquiries and meticulous editorial skills. In her highly praised *Cambridge Companion to Canadian Literature* and as Editor of *Canadian Literature* (quarterly), she demonstrated an ability to balance competing ideas and perspectives.

MERKLEY, Paul – Department of Music, University of Ottawa
Historical musicologist Paul A. Merkley's areas of research are in early music, optical recognition of music, and studies of film scoring. His analysis of modal categorisation of Gregorian chant and studies of Ambrosian chant are significant in the field. His research on French and Flemish musicians in Italian courts of the renaissance has re-framed court and

ecclesiastical patronage and his work on the pre-eminent composer Josquin Desprez has completely overturned the biography and works chronology.

MORTON, Adam – Department of Philosophy, University of Alberta
Adam Morton is one of the English-speaking world's pre-eminent philosophers. His contributions are extraordinary in their range, inventiveness, and originality. Morton has pioneered ideas which have aroused great interest among philosophers in the past three decades. His overriding concern has been to enrich our theories about the mind with a vivid sense of the details of human interaction in the context of our imperfect bundle of capacities and dispositions bequeathed by evolution.

PETERMAN, Michael A. – Department of English, Trent University
Michael A. Peterman is an internationally recognized specialist in Canadian and American literature, and in past and present relations between writers from the two countries. In his work on Susanna Moodie, Catharine Parr Traill, and others, he has fundamentally shaped our understanding of the literary, social and cultural history of English speaking Canada. In addition to producing foundational editions of their public and private writings, his research illuminates the complexity of writers' and women's lives during an era of great social change.

RICOU, Laurence – Department of English, The University of British Columbia
Laurie Ricou is the foremost Canadian scholar and cultural observer in the field of ecocriticism. Author of four important ground-breaking books, he has shaped the way Canadian poetry is read, and reshaped how to understand interconnections between language and the environment. His work has redefined the conventional notion of "regionalism" and demonstrated how precision in language opens to artful analysis.

RIPPIN, Andrew – Faculty of Humanities, University of Victoria
Andrew Rippin is one of the pre-eminent authorities in the field of Islamic studies. His pioneering research focuses on interpretations of the Qur'an written in Arabic, a genre known as *tafsir*. With his deep knowledge and critical approach towards claims of literary sources to their own antiquity, Rippin is a central figure in the debates about the Qur'an and the contexts in which it must be understood.

ROMPKEY, Ronald – Department of English, Memorial University of Newfoundland
Ronald Rompkey's achievements in literary studies reflect a diversity of interests in Eighteenth-century British literature, Newfoundland and Labrador studies, and medical life writing. A master of biography, his sub-specialty is the scholarly editing of the personal narrative. His work situates people and places of his literary investigation in their historical, cultural, social and political contexts and his recent anthology of French travel literature on Newfoundland has opened up a new field of enquiry.

ROY, Patricia – Department of History, University of Victoria
Patricia Roy is an historian known especially for her work in Canadian ethnic history. Students of Euro-Canadian attitudes to East Asian immigrants and their descendants cannot ignore her meticulously researched work. She has also contributed to Canadian urban history with the first scholarly history of Vancouver. Recently, she co-authored (with John Herd Thompson) a history of British Columbia.

VERDUYN, Christl – Department of English and Film Studies, Wilfrid Laurier University
Christl Verduyn has made a significant contribution to Canadian literary scholarship and to the institutional strength of Canadian Studies both in Canada and abroad. Her pioneering work on

Canadian women's writing in both English and French, on race and ethnicity in Canadian literature and on the theory and practice of life writing has opened avenues in all these areas which subsequent scholars continue to explore.

YOUNG, Brian – Department of History, McGill University
Brian Young is one of the most highly respected and influential historians of the commercial, legal and social history of nineteenth century French Canada. He is one of the few English speaking Canadians who has crossed the barriers of language, training and perspective to become fully respected among his francophone colleagues. His role as a teacher is illustrated by his co-authorship of one of Quebec's few officially-approved provincial history texts.

Foreign Fellow / Membre étranger

RESCHER, Nicholas - Department of Philosophy, University of Pittsburgh
Nicholas Rescher is the author of over 90 books and 335 journal articles. He is founder, and for many years editor, of the American Philosophical Quarterly. There is no area in philosophy on which Rescher has not left his mark, a mark typified by deep historical sensitivity and a masterly analytical acuity.

Division des lettres et sciences humaines

DOLAN, Claire – Département d'histoire, Université Laval
Claire Dolan est spécialiste de l'histoire sociale du XVIe siècle français. Sa contribution à l'interprétation originale d'une collectivité complexe et méconnue, sa réflexion critique sur les méthodes et les sources de l'histoire, le dynamisme qu'elle a insufflé aux études sur le XVIe siècle justifient sa réputation d'excellence.

HÉBERT, Pierre – Département des lettres et communications, Université de Sherbrooke
Pierre Hébert possède une vaste expérience du milieu universitaire. Il a publié plusieurs volumes et articles sur divers aspects de la littérature québécoise et, depuis une quinzaine d'années, il a développé un nouveau domaine, l'étude de la censure et de la littérature ; il a publié, nationalement et internationalement, de nombreux livres et articles sur le sujet et est le spécialiste reconnu de ce champ de recherche.

KAREL, David – Département d'histoire, Université Laval
David Karel un chercheur de haut calibre en histoire de l'art. Il est l'auteur d'un ouvrage monumental, le *Dictionnaire des artistes de langue française en Amérique du Nord.* Il a aussi publié des monographies savantes et de nombreux articles, en plus d'être commissaire délégué pour d'importantes expositions au Musée du Québec. L'excellence de ses travaux, leur importance et leur intérêt sont reconnus de tous.

LAMONDE, Yvan – Département de langue et littérature françaises, Université McGill
Yvan Lamonde est connu internationalement pour ses travaux sur l'histoire intellectuelle et culturelle du Québec de 1760 à 1960. Il est pionnier au Canada des études sur le développement de la philosophie et sur l'histoire des idées et il a renouvelé l'histoire de la trame démocratique et libérale au Québec. Il a fait valoir la diversité des héritages politiques et culturels du Québec et prôné le comparatisme dans le grand projet en cours sur l'histoire du livre et de l'imprimé au

Canada qu'il co-dirige.

Arts Division / Division des arts

BERNARDI, Mario – Performing Arts/Music
Appointed Conductor Laureate of the National Arts Centre Orchestra in 1997, Mario Bernardi was its founding conductor in 1969. He has been the Principal Conductor of the CBC Radio Orchestra since 1983. Mario Bernardi has made over thirty recordings with many Canadian orchestras.

BRAND, Dionne – Literary Arts/Writing
A supremely intelligent voice to discourses of multiculturalism and the arts, Dionne Brand is one of the most versatile and prolific writers living and working in Canada today. The author of eighteen works of poetry, fiction, and non-fiction, she has been honoured with the Governor General's, Trillium, and Pat Lowther Memorial Awards.

CRONENBERG, David – Performing Arts/Film Director
David Cronenberg is one of the world's great feature film directors. He is known for his longstanding fascination with biological horror and as a horror and science fiction writer and director. His most recent film, *A History of Violence*, was nominated for two Oscars.

FRENKEL, Vera – Visual Arts/Multidisciplinary
Vera Frenkel is one of Canada's leading interdisciplinary artists and an early pioneer in the areas of video, installation and web-based art, in Canada and abroad. She is among a small number of women who have changed the way in which art is practiced in Canada.

HARRINGTON, Rex – Visual Arts/Dance
The greatest male dancer ever produced in Canada, Rex Harrington was for twenty years a principal with the National Ballet of Canada. Both a spectacular technician and a daring expressive artist, he excelled in the great classical roles, perhaps none more so than Prince Onegin in John Cranko's *Onegin.*

HART, Evelyn – Visual Arts/Dance
One of Canada's greatest, and most beloved, ballerinas, Evelyn Hart joined the Royal Winnipeg's corps de ballet in 1976 and three years later became principal dancer. She has been hailed around the globe for her timeless interpretations of all the classic ballets, including *Giselle, Romeo And Juliet, Swan Lake,* and *The Nutcracker*.

LOCK, Édouard – Arts visuels/Danse
Comptant parmi les artistes les plus renommés qui ont révolutionné notre modernité, témoin fidèle de la scène culturelle de notre époque aussi bien que façonneur de ses registres particuliers, Édouard Locke est un éminent danseur et chorégraphe canadien. Il a œuvré partout dans le monde avec les plus grands artistes, les troupes les plus célèbres de ballet et les maisons d'opéras. En 1980, il crée sa propre compagnie de danse, *La La La Human Steps.*

LOUIE, Alexina – Performing Arts/Composer
Alexina Louie is one of Canada's most highly regarded composers. Her music has been commissioned and performed by leading orchestras, new music ensembles, chamber groups and

soloists across Canada and around the world. Alexina Louie's uniquely personal style is rooted in a blend of East and West that draws, among other influences, on her Chinese heritage.

MERCURE, Monique –Arts d'interprétation/Actrice
Monique Mercure, l'une des actrices les plus respectées du Canada, assume de façon décisive, depuis une vingtaine d'années déjà, un rôle de chef de file à l'École nationale du Théâtre. Elle a joué dans plus de trente films, parmi lesquels des œuvres désormais classiques, telles *Mon oncle Antoine* et *J. A. Martin, photographe*. Elle a remporté pour sa prestation dans ce dernier film le Prix de la meilleure actrice au Festival de Cannes.

PAGE IRWIN, P.K. – Literary Arts/Multidisciplinary
P.K. Page is a Canadian literary icon. During a long and distinguished career, she has been a poet, novelist, script writer, playwright, essayist, journalist, librettist, teacher and artist. P.K. Page has published over two dozen books, provided librettos for leading composers, had numerous exhibitions of her art, and received many awards and honours.

PELLETIER, Pol –Arts d'interprétation/Théâtre
Charismatique, novatrice, provocante, Pol Pelletier est une figure de proue du théâtre canadien. Au cours de la Révolution Tranquille, elle a inspiré en pionnière les premiers théâtres d'art et d'essai ainsi que les théâtres féministes au Québec. Son exploration acharnée de toutes les ressources du théâtre l'a conduite à voyager partout dans le monde. Elle lui gagne aussi le prix récompensant sa performance dans son admirable trilogie solo, *Joie*, *Océan* et *Or*.

PINSENT, Gordon – Performing Arts/Theatre, Film, TV, Radio
A Canadian entertainment icon, Gordon Pinsent is a forty-year veteran of theatre, film, television and radio as an actor, playwright, author and director. Some of his most memorable performances are of characters out of his own novels and screenplays set in his native Newfoundland, including Will Cole in the classic movie *The Rowdyman*.

STRATE, Grant – Performing Arts/Choreographer
Grant Strate has been an immensely influential innovator of dance in Canada. He was a founding dancer of the National Ballet of Canada, established York University's dance program and headed Simon Fraser's University Centre for the Arts. A tireless mentor and inspiring visionary, Strate has written numerous articles and created more than fifty ballets.

TENNANT, Veronica – Performing Arts/Ballet
One of Canada's most beloved prima ballerinas for over a quarter-century, Veronica Tennant has danced every major classical role and performed with all of the great male dancers of her generation. She has since proven equally skilled as a writer, lecturer, director, producer, teacher, spokesperson, administrator, and international arts ambassador.

WALL, Jeff – Visual Arts/Photography
Best known for his transparencies mounted on light boxes, Jeff Wall has played a key role in establishing photography as a contemporary art form in Canada and around the world. His work has been the focus of well-received exhibits in such prestigious venues as the Tate Modern in London.

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ACADEMY OF SOCIAL SCIENCES
ACADÉMIE DES SCIENCES SOCIALES

Social Sciences Division

AUCOIN, Peter – Department of Political Science, Dalhousie University
A leading scholar of public administration and the political process, Peter Aucoin has helped to interpret and shape the great changes that have occurred in public-sector management and the electoral regime. He is distinguished for the practice of his profession in service to government and has demonstrated intellectual leadership on subjects like Senate reform.

BEINER, Ronald – Department of Political Science, University of Toronto at Mississauga
Ronald Beiner ranks among Canada's foremost political philosophers. His many books and articles, in English and in translation, have established his international reputation for incisive analysis of the central concerns of modern political philosophy. His insights on nationalism's effect on citizenship are path breaking while his interpretation of liberalism is as original as it is influential.

CHOCHINOV, Harvey M. – Department of Psychiatry, University of Manitoba
Harvey Chochinov is an international leader, role-model, and scholar in the field of palliative care. His pioneering work has played a major role in the definition of core-competencies and standards of care for practitioners around the world. His many writings in the area of psycho-oncology and palliative care have helped establish the importance of psycho-social considerations in comprehensive end-of-life-care.

DAAR, Abdallah S. - Joint Centre for Bioethics, University of Toronto
Abdallah Daar, initially an internationally-acclaimed biomedical scientist and pioneering transplant surgeon, has evolved to become a leading international global health, science policy and bioethics scholar. His innovative science-policy and biotechnology development program and prodigious research output has resulted in numerous publications and over 40 million dollars in research funding that has had a major impact internationally.

DUBÉ, Laurette – Desautels Faculty of Management, McGill University
Laurette Dubé is a scientific leader in the study of affective processes underlying consumption and lifestyle behavior whose academic achievements are in marketing and health management. Dr. Dubé examines affective processes from their neurobiological manifestations to their conscious experience in order to develop more effective communications and service management strategies and is founding scientific director of the McGill Integrative Health Challenge Think Tank.

JUDD, Ellen R. – Department of Anthropology, University of Manitoba
Ellen R. Judd is a sociocultural anthropologist whose work on women in modern rural China has made path breaking contributions to the anthropology of societies in post-socialist transition and on gender and kinship. Her innovative field research in China has allowed her to create a distinctive body of scholarship in the study of political economy, gender and cultural production and her insights have had wide international influence.

MCCAMUS, John D. – Osgoode Hall Law School, York University
John McCamus is one of the world's leading scholars in the law of restitution; he is an influential contributor of applied scholarship and policy research which has shaped many projects of public and private law reform; and he is an inspiring and innovative leader in legal education, research and reform.

POLIVY, Janet – Department of Psychology, University of Toronto at Mississauga
Janet Polivy's research has had both an important theoretical impact, revolutionizing research on dieting and human eating behavior, and a practical impact on people's strategies in dieting. Professor Polivy was identified as one of the most highly cited psychological researchers in the world. She has a national and international reputation as a scientist and also works to improve and regulate her profession and educate the public.

VALVERDE, Mariana – Centre of Criminology, University of Toronto
Mariana Valverde is an international leader in criminology and the sociology of law. Her award-winning book, *Diseases of the Will: Alcohol and the Dilemmas of Freedom* (Cambridge) has transformed understanding of how the autonomous self is formed through ordinary practices of regulation. Her research not only advances scholarship at the highest level, but is of fundamental significance for public policy and law reform.

WOOLF, Daniel – Faculty of Arts, University of Alberta
Daniel Woolf’s major writings have transformed the history of oral, literate and print culture, as well as the history of historical writing. Exploiting dozens of archives throughout England, he has developed a rounded picture of popular historical beliefs and established a convincing model for the "social circulation" of knowledge within and between social strata.

Division des sciences sociales

COSSET, Jean-Claude – Département des affaires internationales, HEC Montréal
Jean-Claude Cosset est un chercheur de renommée internationale, a contribué au développement des connaissances en finance internationale. Ses études novatrices sur le marché des changes ont permis de déceler la présence d'une prime de risque et de démontrer l'efficience de ce marché. Il pilote actuellement un projet sur la gouvernance et la performance des entreprises dans un

contexte international.

CRAINIC, Teodor Gabriel – Département de management et technologie, Université du Québec à Montréal

Teodor Gabriel Crainic est un chercheur de renommée internationale. Il combine les outils mathématiques et informatiques afin de résoudre des problèmes complexes de gestion. Ses travaux ont permis d'identifier et d'exploiter des structures communes à plusieurs problèmes de transport et de logistique. Sa production scientifique est largement citée et utilisée.

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ACADEMY OF SCIENCES
ACADÉMIE DES SCIENCES

Division of Applied Sciences and Engineering / Division des sciences appliquées et génie

CARREAU, Pierre J. – Département de génie chimique, École Polytechnique de Montréal
Pierre J. Carreau est l'un des piliers de la rhéologie moderne, reconnu internationalement. La loi qui porte son nom est l'un des modèles les plus utilisés en rhéologie. Auteur prolifique avec plus de 200 publications arbitrées, ce leader scientifique de haut rang a contribué à la formation de plus de 70 chercheurs. Il s'occupe également de transferts de technologie vers l'industrie.

CHORNET, Esteban – Département de génie chimique, Université de Sherbrooke
De réputation internationale et l'un des ingénieurs chimistes les plus prolifiques et les plus innovateurs au Canada, Esteban Chornet a fait sa marque par ses approches novatrices en développement et la modélisation de systèmes chimiques et biochimiques complexes et non homogènes. Il est l'auteur de plus de 180 articles savants, de 18 livres et chapitres, et de 21 brevets d'invention.

DEEN, Mohamed Jamal – Department of Electrical and Computer Engineering, McMaster University
M. Jamal Deen is internationally recognized for his research in the analysis, modeling and applications of microelectronic and optoelectronic devices. A highly accomplished researcher, inventor and a prolific scholar, his device models and experimental innovations are used worldwide.

ELLYIN, Fernand – Department of Mechanical Engineering, University of Alberta
Fernand Ellyin has distinguished himself in fundamental and applied research. He is recognized internationally for his original contributions in the constitutive modelling of inelastic deformation and the fatigue and fracture of metals, alloys, and composite materials. The extensive publication record of his research attests to the breadth and depth of his contributions in varied engineering disciplines.

HRUDEY, Steve E. – School of Public Health, University of Alberta
Steve E. Hrudey is an internationally-recognized authority in the fields of drinking water safety and environmental health risk assessment and management. His pioneering research on cyanobacterial toxins was a major impetus for Canada's drinking water guideline on microcystin and he was an architect of the restructured Australian Drinking Water Guidelines.

MANDELIS, Andreas – Department of Mechanical and Industrial Engineering, University of Toronto
Andreas Mandelis is an internationally renowned expert in the development, shaping and applications of diffusion-wave sciences and associated technologies. He pioneered and developed numerous techniques and devices that are now used worldwide for materials research, industrial process quality control, dental caries diagnosis and soft tissue imaging.

TERZOPOULOS, Demetri – Department of Computer Science, University of Toronto
Demetri Terzopoulos is an internationally renowned leader in computer vision and computer graphics whose work has contributed fundamentally to the ongoing unification of these two fields. He is famous for pioneering deformable models and for spearheading their application in vision and graphics, as well as in related domains such as medical imaging and computer-aided design.

Division of Earth, Ocean and Atmospheric Sciences / Division des sciences de la terre, de l'océan et de l'atmosphère

CHEN, Jing M. – Department of Geography, University of Toronto
Internationally recognized, Jing Chen invented a new theory and instrumentation for measuring vegetation structural parameters and pioneered techniques for retrieving these parameters from satellite observations. He has developed innovative computer models to use the new measurement capabilities for quantifying carbon, water, and energy fluxes at leaf, canopy, landscape, regional and global scales.

DEROME, Jacques F. – Département des sciences atmosphériques et océaniques, l'Université McGill
Jacques Derome est reconnu mondialement pour ses travaux pionniers touchant la stabilité dynamique des flux atmosphériques à grande échelle, les échanges d'énergie des fluctuations atmosphériques intra-saisonnières et inter-annuelles, et la prévisibilité des états moyens saisonniers de l'atmosphère. Ses réalisations scientifiques exceptionnelles lui ont valu plusieurs prix et distinctions.

JONES, Brian – Department of Earth and Atmospheric Sciences, University of Alberta
Brian Jones is an earth scientist whose work has convincingly illustrated the importance of microbes on the precipitation of carbonate, silica, and precious metals in hotspring systems throughout geologic history. He is currently using Grand Cayman Island as an extensive natural laboratory to understand the processes of carbonate sedimentation, ecology, geochemistry, and hydrology of ancient, isolated, hydrocarbon-rich, reef platforms.

NELSON, D. Erle – Department of Archaeology, Simon Fraser University
Erle Nelson is an internationally recognized authority on radiocarbon dating. Simultaneously with another Canadian physicist, he was responsible for the invention of the Accelerator Mass

Spectrometer technique for small sample radiometric dating, which is now widely used around the world in many branches of earth and environmental sciences, physics and medicine.

Division of Life Sciences / Division des sciences de la vie

BOUTIN, Stanley – Department of Biological Sciences, University of Alberta
Stan Boutin is the world leader on the ecology of Canada's northern forests. His studies on red squirrels at Kluane, Yukon provided the first evidence of evolution of a natural population in response to climate change, and the first basis to understand the impact of the mother's environment on evolutionary change. Through collaboration with the forestry industry, Boutin has pioneered a new paradigm in forestry management, based on the guiding principles of natural disturbance and succession.

CULOTTI, Joseph G. – Samuel Lunenfeld Research Institute, University of Toronto
Joseph Culotti has done pioneering work in the field of axon guidance for decades, leading to our present understanding of the molecular cues that control axon path finding. His present work is focused on understanding the signaling pathways that control the cytoskeleton in the axon growth cone. Dr. Culotti has an extensive history of scientific achievement, starting with his earliest work in the 1970s that led to the first identification of the genes that regulate the eukaryotic cell cycle. He is among Canada's foremost geneticists and developmental neurobiologists.

HERTZMAN, Clyde – Faculty of Graduate Studies, University of British Columbia
Clyde Hertzman is one of the world's leading health researchers. His major focus is to understand how societal and biological factors converge to determine the health of populations. His work has been extremely influential, not only within the research community, but also at a policy level both nationally and internationally.

HUDSON, Thomas – Departments of Medicine and Human Genetics, McGill University
Thomas Hudson has made major contributions to understanding the structure and regulation of the Human Genome. His laboratory played a critical role in defining human haplotypes and signatures of recombination hotspots, developments central to creating the Haplotype Map of the human genome. In recent work he has focused on mapping human diseases such as asthma, inflammatory bowel disease, and susceptibility to leprosy.

KAY, Lewis E. – Department of Medical Genetics and Microbiology, University of Toronto
Lewis Kay is internationally recognized as a leader in the development and application of NMR spectroscopic methods for the study of protein structure and dynamics. He has pioneered novel approaches for the study of protein dynamics, developed new isotope labelling methods and used innovative methods to examine membrane proteins. Dr. Kay is a superb mentor, a generous collaborator and a model citizen of the scientific community.

OHASHI, Pamela – Campbell Family Institute for Breast Cancer Research, University of Toronto
Pamela Ohashi is an international scientific leader in the field of immunology whose research focuses on understanding how the function of the white blood cells in our body is guided towards defending the body against foreign viruses and bacteria, instead of attacking our own tissues and causing autoimmune diseases such as diabetes or arthritis. Her findings have provided

fundamental guidelines in helping understand autoimmune disease progression and the potential application of immune therapy against tumors.

OTTO, Sarah P. – Department of Zoology, University of British Columbia
Sarah Otto is the foremost theoretical evolutionary biologist in Canada and one of the most respected in the world. Her research on the evolutionary forces that act on the structure of the genome has revealed novel and surprising insight into such fundamental aspects of an organism as the number of chromosomes present, sex and recombination rates along these chromosomes, and the nature of interactions among genes.

PICTON, Terence W. – Department of Medicine, University of Toronto
Terence Picton is a major world figure in sensory and cognitive neuroscience. His work on event-related brain potentials and their significance has been influential for 30 years, and his recent work has shown how brain functions can be understood by combining data from different neuroimaging modalities. He has also applied his findings in clinical settings, to the understanding of schizophrenia for example, and to the development of a powerful new technique for the assessment of hearing.

PLUMMER, Francis – Department of Medical Microbiology and Infectious Diseases, University of Manitoba
Francis Plummer is a physician-scientist, with an eclectic interest in the study of human infections. His studies of HIV-1 in Africa led to the identification of mechanisms of heterosexual transmission of HIV-1 and ultimately the development of highly effective interventions, which are in use world-wide in combating HIV-1. His work on mechanisms of natural protective immunity in a group of HIV-1 resistant prostitutes in Kenya has helped guide HIV-1 vaccine research.

REES, William – School of Community and Regional Planning, University of British Columbia
William Rees is a bio-ecologist and internationally acclaimed pioneer in the study of the root causes of human (un)sustainability. His most influential contribution is his invention of Ecological Footprint Analysis (EFA), a method that measures the human load on the earth. In recognition of its global impact, Rees' co-authored book *Our Ecological Footprint* is available in nine languages, including Chinese.

RUDNICKI, Michael A. – Ottawa Health Research Institute, University of Ottawa
Michael Rudnicki is an outstanding young scientist whose studies of muscle development have placed him at the forefront of international science. He has discovered the key molecules that regulate muscle development in the embryo and that control muscle regeneration from stem cells following injury. Dr. Rudnicki's research has consistently broken new ground and challenged existing paradigms resulting in entirely new concepts of muscle development.

SCHERER, Stephen W. – Centre of Applied Genomics, University of Toronto
Stephen Scherer is an internationally known geneticists making seminal contributions to the understanding of the human genome. His group recently discovered the phenomena of large structural alterations as a common type of variation in the human genome contributing to both disease and evolution of chromosomes. Dr. Scherer has won numerous awards including the 2004 Steacie Prize, currently chairs Genome Canada's Advisory Board, and is the Canadian representative on the Human Genome Organization Council.

SCHIFFRIN, Ernesto L. – Sir Mortimer B. Davis Jewish General Hospital, McGill

University
Ernesto Schiffrin is one of the great clinical scientists in Canada, and a world leader in the field of the mechanisms and management of arterial hypertension. Amongst many contributions, he demonstrated that anti-hypertensive drugs interfering with the renin-angiotensin-aldosterone system correct blood pressure and the structural remodeling of resistance arterioles. He also showed the role of endothelin in this vascular remodeling.

STRYNADKA, Natalie – Department of Biochemistry and Molecular Biology, University of British Columbia
The research work of Natalie Strynadka has focused on determining high resolution structures of proteins that play critical roles in antibiotic resistance and in infectious diseases caused by bacterial pathogens, including the clinically notorious superbug MRSA and the pathogenic *Escherichia coli* that plague our health care system. At the core of her research is X-ray crystallography, which allows the analysis of the three-dimensional structures of these proteins.

TREMBLAY, Michel L. – McGill Cancer Centre, McGill University
Michel Tremblay is the world's expert in protein phosphatases. He has made these remarkable discoveries through his pioneering use of transgenic mice to investigate their function and his ground-breaking paper on the knock-out of PTP-lB showed that it is key in diabetes, obesity and cancer progression. The impact of this research on human health is best demonstrated by the fact that 40 pharmaceutical companies worldwide have PTP-lB drug discovery programs.

TRIMBLE, William – Hospital for Sick Children, University of Toronto
William Trimble has made important discoveries that help to explain how cells in the brain communicate for each other. This discovery has impacted all fields of biology since it is now known that these same mechanisms are used for membrane fusion in all cell types and in all organisms. Dr. Trimble has also discovered a new group of proteins that participate both in brain communication and cellular division, and may provide insights into how cancer develops.

WANG, Yu Tian – Brain Research Centre, University of British Columbia
Yu Tian Wang has transformed the understanding of fundamental mechanisms of synaptic transmission and neural plasticity serving essential roles in cognition and emotion. Dr. Wang's most revolutionary discovery demonstrated that dopamine and GABA receptors influence each other via protein-protein interactions. The discoveries made by Dr. Wang have been used to guide the development of novel drugs for modulation of aberrant synaptic plasticity related to mental illness.

WRANA, Jeffrey – Samuel Lunenfeld Research Institute, University of Toronto
Jeff Wrana has played a key role in deciphering the signaling pathways activated by the TGFß superfamily of secreted growth factors, and has made lasting contributions to our understanding of signal transduction. In his recent work he has discovered proteins, such as SARA and the SmurfE3 ubiquitin ligases, which regulate TGFß receptor/Smad signaling. Jeff's work has been pivotal in demonstrating the importance of TGFß receptor/Smad signaling in normal vertebrate development, and in human cancers.

Foreign Fellow / Membre étranger

BOLLI, Roberto – Department of Medicine, University of Louisville
Dr. Roberto Bolli is a world leader in the field of cardiovascular medicine. He is a well established and superior scientist in the field of cardiovascular research as his fundamental and innovative work has shaped our understanding of cardiac ischemia-reperfusion injury. His

pioneering work on the mechanisms of myocardial stunning and ischemic preconditioning has paved the way for the development of novel cardioprotective therapies.

Specially Elected Fellow / Membre à titre spécial

LOMAS, Jonathan - Canadian Health Services Research Foundation
Dr. Lomas is an academic pioneer and the author of an impressive array of seminal and widely cited publications in the area of health services and policy research. He has singularly shaped global discourse with his work on bridging health research and policy, not only changing the Canadian landscape of health services research and delivery, but also creating an unparalleled reputation for Canadian leadership in this field.

Division of Mathematical and Physical Sciences / Division des mathématiques et sciences physiques

D'IORIO, Marie – National Research Council Canada
Marie D'Iorio is a condensed matter physicist who has worked at the forefront of the field of electronic properties of semiconductor quantum heterostructures, and more recently organic semiconductors and insulators for photonic and electronic applications. Her leading edge work on structure-property relationships of novel electroluminescent molecular materials led to the design of materials patented for their light emission efficiency, tunability, electronic conduction and photovoltaic properties.

GRANVILLE, Andrew – Département de mathématique et de statistique, Université de Montréal
Les travaux d'Andrew Granville incluent de nombreuses contributions de première importance aux aspects combinatoire, algébrique, diophantien et analytique de la théorie des nombres. Granville s'attaque à des questions fondamentales, a résolu de plusieurs problèmes qui étaient demeurés ouverts depuis de nombreuses années et a reçu de nombreux honneurs. Granville est aujourd'hui un des premiers mathématiciens canadiens et un des plus grands théoriciens des nombres analytiques au monde.

HAWRYLAK, Pawel – National Research Council Canada
Pawel Hawrylak has demonstrated exceptional ability as a research scientist and enjoys an enviable international reputation. He has played a pivotal role in the theory underlying the fundamental understanding of artificial atoms also known as quantum dots. His extraordinary command of theoretical semiconductor physics has allowed for the realization of his dream of scientific excellence with positive societal impact.

HITCHCOCK, Adam – Department of Chemistry, McMaster University
Adam Hitchcock has made pioneering contributions to near-edge x-ray absorption fine structure spectroscopy of core levels in molecules, surfaces and solids. He is a leading contributor to the emergence of the new technique of scanning transmission x-ray microscopy as a high resolution imaging method for materials research. He has demonstrated scientific leadership in the development and planning of the Canadian Light Source as an internationally competitive new Canadian research facility.

LEVESQUE, Hector – Department of Computer Science, University of Toronto

Hector Levesque is a foremost authority in the area of Knowledge Representation, the sub area of Computer Science concerned with how ordinary, common sense knowledge can be represented and used by computers. He and his collaborators have initiated important new lines of research in this area including the relationship between implicit and explicit belief, the tractability of reasoning, new methods for solving problems in logic, and cognitive robotics.

LI, Ming - School of Computer Science, University of Waterloo
Ming Li is a leading expert on Kolmogorov complexity. His work has led to a new method for proving lower bounds and analyzing average-case complexity of algorithms and to the solution of a number of long standing major open questions in computer science. He is an influential international leader in the development of bioinformatics algorithms and software who, along with his coauthors, has produced theorems, algorithms, and proofs that are included in major computational biology books and software packages used widely.

MYERS, Robert – Perimeter Institute for Theoretical Physics and University of Waterloo
Robert Myers is an outstanding theoretical physicist whose research has made him Canada's most renowned string theorist and places him among the highest ranks of string theorists around the world. His highly-cited groundbreaking contributions include pioneering research on gravity in higher dimensions, black holes, discovery of the "Myers effect" in M-theory and work showing that cosmic superstrings may leave an observable imprint in the sky.

PIERS, Warren E. – Department of Chemistry, University of Calgary
Warren Piers is recognized internationally for his outstanding contributions to organometallic chemistry which combines creative synthetic strategies with insightful mechanistic studies. He is known for his creative development of highly fluorinated boron-based Lewis acids for use as co-catalysts in olefin polymerization, for innovative contributions to early transition-metal chemistry, and for the discovery of highly active olefin metathesis catalysts.

STETSON, Peter B. – National Research Council Canada
Peter Stetson has developed computer software to facilitate the measurement of brightness and colours of individual stars in stellar clusters and other areas of the sky in which the recorded images of the stars are crowded together, or overlapping. The software is in high demand and is used by astronomers world-wide. Stetson himself has applied it to the study of the ages of stars and to the determination of the age of the universe from its expansion rate. On all these topics he is considered a leading authority.

THOMPSON, Mary E. – Department of Statistics and Actuarial Science, University of Waterloo
Mary Thompson's research spans an exceptionally broad range of areas in statistical science, including pure and applied probability, mathematical statistics, the theory of sample surveys, and several areas of application. Her seminal work on optimality and the foundations of inference for finite populations, optimal estimating functions, and inference for stochastic processes has had a major impact and has been combined with important applied contributions in other disciplines.