The Canadian Academy of Engineering | L'Académie canadienne du génie

Pour diffusion aux médias

Cinquante-deux nouveaux Fellows élus à l'Académie canadienne du génie

Ottawa – (15 juin 2020) – Le président Yves Beauchamp a annoncé l'élection de cinquante nouveaux Fellows et de deux nouveaux Fellows internationaux à l'Académie canadienne du génie le 15 juin 2020. L'annonce a été faite dans le cadre de l'assemblée générale annuelle 2020 de l'Académie qui a été tenue par vidéoconférence en raison des circonstances entourant la COVID-19. La cérémonie d'intronisation, qui honorera les Fellows élus pour 2020 et 2021, a été reportée au mois de juin 2021, et se tiendra à Halifax en Nouvelle-Écosse.

Voici les commentaires de M. Beauchamp, Ph. D. : « Au cours des 33 dernières années, les Fellows de l'Académie ont offert du leadership en matière d'ingénierie dans les domaines de l'éducation, des infrastructures, de l'innovation et encore plus. Nous nous attendons à ce que les nouveaux Fellows approfondissent ces contributions pour assurer la prospérité, le bien-être et la viabilité du Canada et de ces citoyens et citoyennes. Les nouveaux Fellows appliquent les principes d'ingénierie provenant d'horizons extrêmement divers, de l'industrie, des universités et du gouvernement, mais ils ont tous en commun leur volonté et leur capacité éprouvées d'aller au-delà de la pratique normale de l'ingénierie et de servir de modèles dans leurs domaines d'expertise et au sein de leurs collectivités. » Citations et photos de chacun des nouveaux Fellows suivront.

L'Académie canadienne du génie (ACG) est l'institution nationale par l'entremise de laquelle les ingénieurs canadiens les plus distingués et expérimentés fournissent des conseils stratégiques sur des sujets d'importance critique pour le Canada. L'ACG est un organisme indépendant, autonome et sans but lucratif qui a été fondé en 1987. Les Fellows de l'ACG sont nommés et élus par leurs pairs en raison de leurs réalisations exceptionnelles et leurs longs états de service auprès de la profession d'ingénieur. Les Fellows de l'Académie canadienne du génie sont déterminés à s'assurer que l'expertise en ingénierie du Canada soit mise au profit de tous les Canadiens.

L'Académie canadienne du génie travaille en étroite collaboration avec d'autres académies de renom au Canada et à l'échelle internationale. Elle est une membre fondatrice du Conseil des académies canadiennes (CAC), ainsi que de la Société royale du Canada et de l'Académie canadienne des sciences de la santé. L'ACG est également membre de l'International Council of Academies of Engineering and Technological Sciences, lequel englobe près de 26 organes nationaux du monde entier.

Pour obtenir des renseignements supplémentaires ou une entrevue, veuillez communiquer avec :
Robert Crawhall, Ph. D., ing., PMP
Directeur général
Téléphone : 613 725-4091
Courriel : robert.crawhall@cae-acg.ca

NEW FELLOWS 2020

Baher Abdulhai, Professor, University of Toronto

Professor Baher Abdulhai conducts leading-edge research at the University of Toronto to reduce traffic congestion in smart cities. His achievements include the establishment and leadership of the Intelligent Transportation Systems Centre and the iCity Centre for Automated and Transformative Transportation Systems, and the invention of traffic signal control systems which have been licensed by major technology firms. Dr. Abdulhai's record of service includes the Board of the Ontario Transit Authority and Canada Research Chair (CRC) in ITS. He is a fellow of the Engineering Institute of Canada and recipient of the 2018 Canadian Society for Civil Engineering Sandford Fleming Award.

Purang Abolmaesumi, Professor, University of British Columbia

Prof. Abolmaesumi is an outstanding and innovative researcher with an international reputation for his contributions to cancer imaging and image-guided interventions. His work covers medical image analysis, from theory to practice in computer-aided diagnosis and therapy systems. His innovations in ultrasound imaging are used globally at leading research institutions. He has mobilized an international network of interdisciplinary researchers and industry on development of new biomedical engineering solutions with direct impact on patient care.

Bill Adams, Vice President, Sustainability & Innovation, Mercer International

Bill Adams has made outstanding and lasting contributions to engineering practice in Canada's pulp industry, most notably in establishing technologies to produce renewable energy from biomass and innovations to enhance pulp quality for high value products. He has also provided skilled and highly respected leadership in forest industry sustainability, both in technical matters and in interactions with the various stakeholders of Canada's forest resource. In addition to these contributions to Canada, the nominee has generously donated his time and exemplary engineering skills to furthering Canada's tremendous legacy in humanitarian assistance through his substantial charitable works in third world countries.

Hanan Anis, Professor, University of Ottawa

An experienced entrepreneur herself, Dr. Anis has pioneered the concept of entrepreneurial design in engineering education. She has been the driving force behind transformational changes at the University of Ottawa: Courses on innovation and entrepreneurship for students; student competitions in design and entrepreneurship; increased participation of uOttawa Engineering students in pre-professional competitions at the international level; facilities and resources that support and foster innovation among students. Hanan also spearheaded the establishment of the student-run uOttawa Engineering Makermobile that has rapidly become an integral, differentiated, and very effective component of the engineering promotion and outreach enterprise at uOttawa.

Carl-Éric Aubin, Professor, Polytechnique Montréal

Dr. Aubin is a professor of biomechanical engineering at Polytechnique Montréal and a researcher at CHU Sainte-Justine. He is the Executive and Scientific Director of the TransMedTech Institute for Medical Technology. A prominent, prolific and visionary researcher, Dr. Aubin is internationally recognized for his innovative work in orthopedic engineering, as well as for his structuring initiatives in transdisciplinary and intersectoral open innovation ecosystems for the development and implementation of next-generation health technologies. His achievements change lives, his initiatives encourage innovation in biomedical engineering, and his leadership strengthens the life sciences ecosystem of Quebec and Canada.

François Bertrand, Senior Vice-President, Vice-President Academic & Research, and Professor, Polytechnique Montréal

Professor François Bertrand is Senior Vice-President and Vice-President Academic & Research at Polytechnique Montréal, one of Canada's top technological universities. He is a world-renowned chemical engineer, specializing in the dynamics of fluids and solids in chemical engineering processes, with an emphasis on mixing, and in the modeling of transport phenomena in multiphase systems. He also is renowned for his many contributions to the engineering community and society at large, notably through the training of highly qualified personnel, his significant involvement in national and international scientific societies, and the transfer of several advances to industry.

Neil Bose, Vice President (Research), Memorial University of Newfoundland

Neil Bose is a naval architect and ocean engineer who is recognized as an international expert in marine propulsion, underwater robotics and autonomous underwater vehicles. He leads Memorial University's research agenda as the Vice-President (Research). Prior to this, he was Principal of the Australian Maritime College, University of Tasmania. He sits as chair or member of many internationally influential committees and boards. He was recognized by Engineers Australia as one of the Top 100 Most Influential Engineers in Australia in 2015 and received an honorary degree from the Nikola Vaptsarov Naval Academy, the oldest technical educational institution in Bulgaria.

Neil Camarta, Founder, Director, Enlighten Innovations

Neil Camarta is a chemical engineer and currently President and CEO of Field Upgrading Ltd. He also co-founded and served as the CEO of Western Hydrogen Ltd. Previously, he held positions as Executive Vice President – Natural Gas at Suncor Energy, leader of the Athabasca Oil Sands Project at Shell, and Senior Vice President of Petro-Canada's oil sands business. Neil Camarta directorships includes ENMAX Corp., MindFuel and Alberta Shock Trauma Air Rescue Society. Camarta founded and heads the FSHD Canada Foundation that supports research into facioscapulohumeral muscular dystrophy (FSHD) a muscle disease that causes muscle weakness affecting adults and children.

Jinwen Chen, Director, CanmetENERGY-Devon, Natural Resources Canada

Dr. Jinwen Chen has provided exceptional leadership as the Director of Downstream and Renewables at CanmetENERGY-Devon, Natural Resources Canada. He leads major R&D programs in bitumen upgrading, petroleum refining, biofuels, and life-cycle GHG emissions assessment. His internationally recognized achievements have strongly influenced government decision-making and policy development, technology innovation, engineering practice, and the advancement of fundamental science. He has received multiple government awards, for his outstanding accomplishments and impacts, and for his exceptional leadership. He has authored a large number of highly cited publications, and is frequently invited by universities, R&D organizations and industries to give lectures, seminars and presentations.

Yves Choinière, Project Leader, Research & Development, Consultants Lemay & Choinière Inc.

Yves Choinière, engineer and agronomist, B.Sc. (1983), M.Sc. (1991) received the honors of Young Engineer of the Year, the Turnbull Prize in Agricultural Structure, the Industrial Prize and the title of Fellow of the CSBE/SCGAB. Yves Choinière led the design of several research centres in animal production (McGill, Guelph, Saskatchewan, Agriculture Canada and others). Its notoriety has been established thanks to the multiple innovations and developments for modern agricultural buildings. Consultants Lemay & Choinière Inc., founded in 1995, now employs 45 people; including 25 project managers, making it the largest agricultural engineering firm in Canada.

Keng Chung, Vice President of Technology, Well Resources Inc.

Dr. Keng Chung is globally renowned for his expertise in energy system and petroleum operations. With 40 years of industrial experience, he pioneered and patented several commercial processes and novel technologies used in the petroleum industry. He advocates wasteless processing and resource utilization. He has authored more than 300 journal publications and mentored more than 50 post-doctorate fellows. Dr. Chung advises governments, corporations, and investment banks on green technologies and natural resource management. He is a recipient of the Alberta Science and Technology Leadership Award, a Fellow of Engineers Canada, and an Honorary Fellow of Geoscientists Canada.

Robert Crawhall, Executive Director, Canadian Academy of Engineering

Robert Crawhall is an Executive Leader in technical innovation. A mechanical engineer with a PhD in EMI/EMC, he has contributed to world-leading products and the development of disruptive technologies with BNR/Nortel. Dr. Crawhall has held executive, board and advisory positions in over 20 innovation organizations drawing on nearly four decades of experience with industry-academia-government collaborations that span telecommunications, semiconductors, e-Commerce, nanotechnology, advanced manufacturing, aerospace, nuclear power, the Internet-of-Things, AI/Machine Learning and cybersecurity. He is recognized for over 25 years in Standards development, is a Senior IEEE Member, a certified PMP and a licensed engineer. Robert is Executive Director of the CAE.

Michael Cunningham, Professor, Queen's University

Michael Cunningham is a Chemical Engineering Professor at Queen's University and FCIC. An internationally recognized authority on sustainable polymer manufacturing, his patented processes are used industrially. His innovative approaches have contributed to producing materials using water-based, rather than solvent-based processes, and creating novel bio-sourced materials. Dr. Cunningham collaborates and consults extensively with industry, and for 15 years has taught industry courses in North America and Europe. His award-winning Green Chemistry/Engineering work has important societal, economic and environmental implications, and he has been recognized nationally and internationally. In 2018 he was among the top 5% cited authors in all RSC journals.

Geoffrey Fernie, Senior Scientist, Toronto Rehabilitation Institute

As a professor at the University of Toronto, Dr. Geoff Fernie has applied his engineering skills to solving problems commonly encountered by people with disabilities and an aging population. He led the creation of world-leading research labs where engineering is applied to preventing accidents, restoring function after an accident or illness and supporting people to live independently as they age. Dr. Fernie has also pioneered engineering approaches to reducing the transmission of infection. His work has resulted in 47 patents and the commercialization of twelve products. He has received several prestigious awards and was inducted into the Order of Canada in 2017.

Jerzy Floryan, Professor, University of Western Ontario

Prof. J. M. Floryan is a distinguished scholar working in fluid mechanics with a wide range of pioneering research, e.g. laminar flow airfoils, crystal growth, spray formation using electric fields, drag reducing surfaces, structured convection, patterns in flow control, chaotic mixing, immersed boundary conditions method, generalization of stability theory. He is the author/co-author of 150 journal papers and 300 conference contributions. He received major awards from Germany, France, US, Singapore, Japan, China, Poland, and Israel. He served as chair of his academic department, CSME President, and Canadian representative to IUTAM. He is a Fellow of APS, ASME, CSME, CASI, JSPS, NATO, and EIC.

Benoit Gosselin, Professor, Université Laval

Benoit Gosselin, Professor of Electrical Engineering at Université Laval, is a world-leading expert in low-power microelectronics and biomedical technology. His innovative wireless microelectronic platforms have changed the way neuroscientists study brain function and its associated diseases. These platforms are ground-breaking by enabling the observation of brain dynamics in live animal models through miniature instrumentation technology incorporating optogenetics, electrophysiology, fiber-photometry and spectroscopy. He commercialized the product of his research with Doric Lenses Inc. He won several important awards, including the NSERC 2018 Brockhouse Canada Prize for Interdisciplinary Research in Science and Engineering, and the 2019 Prix Génie Innovation of the OIQ.

Chantal Guay, Chief Executive Officer, Standards Council of Canada

Chantal Guay has shown outstanding creativity and leadership throughout her career in engineering, from her early work in enabling brownfield redevelopment in Montreal, an activity which eventually lead to similar activities across the province, to her role as CEO of Engineers Canada, where she initiated the 30-by-30 initiative and oversaw the highly successful National Engineering Summit in 2009, to her current position as CEO of the Standards Council of Canada, where she is overseeing the promotion of standards and accreditation in Canada and abroad. Chantal is a role model for all engineers but particularly for women engineers.

James Hanlon, Chief Executive Officer, Centre for Ocean Ventures and Entrepreneurship

Jim Hanlon P.Eng., has had a forty year career in engineering. In that time he has led three innovative companies, mentored hundreds of young engineers, and made major contributions to his province, his country, and his profession. Jim has been the driving force behind the development of a growing ocean engineering industrial cluster in Halifax. He is a tireless champion of Industry-University collaboration. He has worked to create two extremely important institutions. The Ocean Frontiers Institute and the Centre for Ocean Ventures & Entrepreneurship (COVE).

Duncan Hannay, Retired President and CEO of Street Capital, Private Investor, Advisor and Philanthropist

Duncan Hannay is a high-impact executive with over 25 years of leadership experience at the intersection of financial services and technology. He has an exemplary record of both acquiring and growing technology businesses, having architected numerous disruptive digital platforms and go-to-market strategies. These include building E*TRADE into a North American challenger brand, the introduction of Tangerine Bank in Canada, and the transformation of Toronto-based D+H to FINASTRA, now the third largest fintech globally. He was most recently CEO of Street Capital Group based in Toronto. Duncan is very proud of his long-term involvement with Covenant House, Canada's largest shelter for homeless youth.

D. Jean Hutchinson, Professor of Geological Sciences and Geological Engineering, Queen's University

D. Jean Hutchinson, Geological Engineering Professor, Queen's University, is a nationally and internationally recognized researcher in rock engineering, volunteers with technical societies nationally and internationally, and is a well-respected educator. Recognition includes awards (7) and medals (3) in these areas, including the 2019 Glossop Medal from the Geological Society of London. Dr. Hutchinson and her team pioneered the use of new engineering approaches to support risk based decision making and rock slope stability assessment using remote sensing. Dr. Hutchinson actively promotes women in STEM and is pleased to work in a department where faculty and students are at gender parity.

Reza Iravani, Professor, University of Toronto

Professor Reza Iravani, University of Toronto, has developed innovative solutions to several engineering problems associated with the applications of power electronics and emerging control and operational concepts in electrical energy systems, including, i) utilization and grid-integration of renewable energy resources, ii) efficient utilization of the legacy-grid asset, and iii) modernization of the electric grid. He is the former Editor-in-Chief of IEEE Transactions on Power Delivery and co-author of the reference book 'Voltage-sourced Converters'. His contributions to the field of electrical power engineering have been recognized with fellowships in IEEE and the Royal Society of Canada.

Waguih Ishak, Division VP & Chief Technologist, Corning Research & Development Organization

Dr. Waguih Ishak is a visionary chief technologist with an outstanding record of fostering and inspiring innovation. He has established state-of-the-art research laboratories from scratch at several global high-tech companies, most recently the Corning West Technology Center in Silicon Valley, which is a powerhouse for the development of new innovations related to high-speed interconnect, novel display, solid-state illumination, and embedded sensor technologies. As an international leader in optics and photonics research, and a successful technology entrepreneur, he is driven by his appreciation for technology R&D for the betterment of our society. He is a Life time Fellow of IEEE.

Charles Q. Jia, Professor, University of Toronto

Professor Charles Q. Jia has been a pioneer and champion in promoting sustainability. His original work at University of Toronto has helped transform major industrial wastes into valued resources, develop the widely influential strategy of "using waste to treat waste," and significantly strengthen Canada's position as a global powerhouse for natural resources. A dedicated community leader and educator, Dr. Jia has made outstanding contributions to the engineering profession through his infectious passion for a sustainable planet and tireless dedication to developing the next generation of great young engineers.

Harold Kvisle, Board Chair, ARC Resources / Finning International

Hal Kvisle is a Canadian business leader and a strong supporter of Canadian engineering excellence. He served as CEO of TransCanada PipeLines (now TC Energy) from 2001 to 2010, growing that company into North America's largest gas pipeline operator. Under his leadership TC built the Keystone oil pipeline system and entered the nuclear power business through Bruce Power. Hal was recognized as Canada's Outstanding CEO in 2008, as Canadian Business Leader in 2009, as Distinguished Business Leader in 2010, and received honorary degrees from Mt Royal University and the University of Calgary. Hal has served as a board member or chair of multiple organizations and on advisory panels for the Alberta and Canadian governments, and currently serves as founding Chair of the Business Council of Alberta.

Faizel Lakhani, Chief Executive Officer, apisec.ai

Faizel Lakhani is a recognized expert in pioneering Big Data and AI for business applications. With experience in network intelligence, enterprise services, digital analytics and Internet of Things applicatoons, he has dedicated his career to growing and transforming businesses. He speaks and writes on the understanding and intelligence required for managing Big Data and Security. With a distinguished career working for and leading the world's best known Fortune 1000 companies, Lakhani is a member of the Forbes Technology Council, writing articles for the Council about the challenges and disruptions in network intelligence, security and analytics.

Jacques L'Ecuyer, Consultant

Dr. Jacques L'Ecuyer is an exceptional innovator, a visionary entrepreneur and an industry leader in high purity materials for pharmaceutical, electronic and industrial applications. He is the founding president of "5N Plus Inc.", an industry leader, serving complex and fast-moving technology-based markets with more than 50 products manufactured by 500 employees at several manufacturing facilities located around the world. His commitment to society is illustrated by his environmentally focused business decisions, and his generous support of engineering education in establishing the creation of a chair in Material Engineering at École Polytechnique de Montréal.

Yong Lian, Professor, York University

Professor Lian is an internationally recognized pioneer in the field of biomedical circuits and systems. His profound contributions to low power circuits include multi-stage frequency-response techniques for FIR filter, event-driven system architecture for ultra-low power biomedical sensors. He is the author of more than 300 peer-reviewed research articles and 6 patents. His research has received many awards and distinctions including the 1996 IEEE Circuits and Systems (CAS) Society's Guillemin-Cauer Award, and inductions as an IEEE Fellow. He has provided an exemplary leadership and service as the IEEE CAS Society President, Editor-in-Chief of the IEEE Transactions on Circuits and Systems II.

Peter Mabson, CEO, President and Director, exactEarth Ltd.

While at COM DEV, Peter Mabson and his team conceived and demonstrated the concept for a microsat-based satellite constellation and signal detection technology to track the world's shipping from space. Subsequently a new company, exactEarth, was formed to implement a full commercial system to provide this capability on a global basis. Since 2010 exactEarth has made significant contributions to global maritime safety, surveillance, environmental protection and maritime commerce. Today, exactEarth is the recognised global leader in satellite AIS services and has over a thousand customers in 40 countries. In 2010, exactEarth received the Ontario Premier's Award for Innovation.

Scott Mao, Professor, University of Pittsburgh

Professor Mao is an international leader in education and research in mechanical and materials engineering. He has made outstanding contributions in fracture and mechanical behavior of materials, leading to significant progress and breakthroughs in the damage evaluation of engineering structures. Dr. Mao has been invited for over one hundred times as keynote, plenary or invited speakers in well-known international conferences/symposia for his contributions in materials. His total citation reaches 14,437 with H-index of 61. He serves as editor and associate editor in two respected material engineering journals. Dr. Mao was honoured by distinguished awards at his home institution and internationally.

Emily Moore, Director, Troost Institute for Leadership Education in Engineering, University of Toronto

Emily Moore is Director of the University of Toronto's Troost Institute for Leadership Education in Engineering, leading the development of the next generation of engineering leaders. Prior to this, she spent ten years in senior roles at Hatch Ltd., where she developed Hatch's international water business into a global performer. Previously, her work at Xerox resulted in 21 patents and a novel toner technology. Dr. Moore was President of the Canadian Society for Chemical Engineering from 2011-2012. In 2016 she received the Society of Chemical Industry's Kalev Pugi Award and was named one of 100 Global Inspirational Women in Mining. Dr. Moore serves on the board of Metrolinx and Chemtrade Logistics Inc.

Catherine Mulligan, Professor, Concordia University

Professor Catherine Mulligan of Concordia University is an exceptional educator, an internationally recognized expert in the decontamination of water, soils, and sediments, and a pioneer of green remediation technologies. She is the Founding Director of the Concordia Institute of Water, Energy and Sustainable Systems, and has taken numerous leadership roles in engineering societies and editorial boards of which she is a member. Her fundamental and applied contributions to research and her service to the engineering profession have been recognized with prestigious awards, most recently the John B. Stirling Medal (2018) from the Engineering Institute of Canada.

Patrick Paultre, Professor, Université de Sherbrooke

Patrick Paultre is an internationally recognized expert in structural dynamics, reinforced concrete structures and dam engineering. His research results have been adopted in codes and standards, nationally and internationally. A dedicated teacher, he has written textbooks on design of concrete structures and dynamics of structures and has developed design tools that are widely used by the profession. He spearheaded and directed the Interuniversity Research Center on Structures under Extreme Loading (CEISCE) for 12 years. He is the recipient of the Armand-Frappier Quebec Prize, one of the highest awards from the Quebec Government. He is Chevalier of the Quebec National order.

Jian Pei, Professor, Simon Fraser University

Dr. Jian Pei has made seminal contributions to the foundation of data science, data mining, data analytics, data engineering and applications. In particular, he invented the state-of-the-art pattern mining principles and a series of methods, which have been highly cited, extensively used by industry, and adopted by data mining textbooks and open source software toolkits.

Ian Potter, President and CEO, Vineland Research and Innovation Centre

Dr. Potter has helped shape the engineering community's forward-looking contributions to Canadian society. At NRC, he led the transformation of engineering to strategic, industrially-focused programs to support economic development in Canada. At Alberta Innovates Technology Futures and its predecessors, he led the launch of sustainable-energy-technology programs, and their interconnections with other sectors across Canada. He has substantial R&D leadership and executive management experience, spanning the government, not-for-profit, university, military and industrial sectors - including Vice President of NRC, COO of AITF, Senior Research Engineer with C-FER Technologies, Assistant Professor at the University of Calgary, Royal Naval Officer, among others.

Sumitra Rajagopalan, Founder and CEO, Bioastra Technologies

Sumitra Rajagopalan is an applied scientist, entrepreneur, university guest lecturer, science journalist/documentarian and Founder and current CEO of Bioastra Technologies. Using an open innovation model Bioastra has become a market leader in smart materials commercializing stimuli-responsive polymers which are disrupting several markets worldwide. In response to the COVID pandemic the company has added smart face covering and an anti-COVID product pipeline. In addition, she has created a one of a kind materials education program in alliance with three universities to provide valuable R&D and work experience to recent graduates in materials science and engineering. Bioastra is the first company to partner with the City of Montreal in the "Adopt a School" program which involves mentoring and offering enriched curriculum option for students at the Royal Vale School.

Rehan Sadiq, Executive Associate Dean, The University of British Columbia

Dr. Sadiq is a leading researcher in the field of environmental risk analysis and lifecycle assessment of built environment. His pioneering work on asset management of water distribution networks is a basis for policy-making in countries around the world. Dr. Sadiq has been instrumental in building the School of Engineering at The University of British Columbia's Okanagan campus as a leading incubator for high quality engineering education and research. He is a member of many engineering societies, and sits on the editorial board of leading journals in his field. He is one of the top cited civil engineering researchers globally.

Yvon Savaria, Professor, Polytechnique Montréal

Professor Savaria has made outstanding contributions to microelectronics. He recently obtained a NSERC industrial Chair and was the scientific leader of several large projects producing a dedicated wafer-scale integrated circuit and a prototype technology that predated similar Graphic Processing Units. He co-founded MiroTech Microsystems that commercialized early FPGA-based reconfigurable computers, and LTRIM that commercialized a laser trimming technology for analog integrated circuits. He served CMC Microsystems supporting 10000 participants, as a Board member for 20 years and was a principal investigator of several CMC projects bringing more than 100M$ funding. He was awarded a NSERC Synergy prize and is IEEE Fellow.

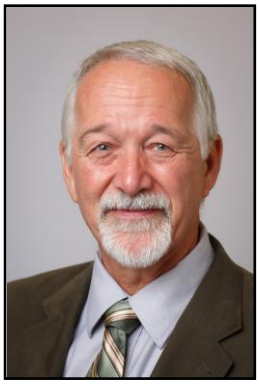
Cécile Siewe, Director General, CanmetENERGY, Petroleum Sector, Natural Resources Canada

Dr. Cécile Siewe is a leader in the energy field, championing process developments that have significantly improved both operations and policies. Throughout her career at Shell Canada, and now as the Director General with Natural Resources Canada, she has been successful because of her strong technical skills and her leadership. Dr. Siewe has volunteered her time through numerous Board memberships and Natural Sciences and Engineering Research Council Committees. She has an outstanding ability to communicate with, and effectively coordinate, different stakeholders including the general public, research scientists, fellow engineers, and government officials.

Mallikarjun Tatipamula, Chief Technology Officer, Ericsson

Dr. Mallik's contributions to the telecommunications industry are through practical innovations and implementations in Internet Protocols, Software Defined Networking, Network Function Virtualization technologies, enabled 2G to 3G, 3G to 4G and now 4G to 5G migrations. He held executive positions at Ericsson, Cisco, Juniper, F5 in delivering multi-billion dollars products adopted by global telecommunications operators. He contributed to telecommunications standards, coauthored 2 books, 100+ publications and U.S. patents. He is visiting professor at King's College London. He serves on advisory board of Global Semiconductor Alliance, start-ups. He taught at Stanford, UC Berkeley. A Fellow of IET (UK), executive of the year 2016.

Tamás Terlaky, Endowed Chair Professor, Lehigh University

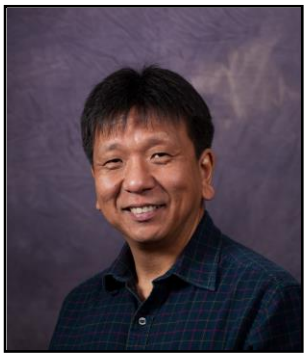


Tamás Terlaky is a leading optimization expert with four authored books and over 180 scientific papers. He is Founding Editor-in-Chief of the journal Optimization and Engineering. Currently Endowed Chair Professor at Lehigh University, previously Canada Research Chair in Optimization at McMaster University, Founding Director of Canada's first School of Computational Engineering and Science. He received the MITACS Mentorship Award, the Award of Merit of CORS, the Wagner Prize of INFORMS, and the Outstanding Innovation in Service Science Engineering Award of IISE. He is a Fellow of the Fields Institute, INFORMS and SIAM, and serves as Vice President of INFORMS.

Roger Tong, Chief Executive Officer, Asia Satellite Telecommunications Co. Ltd

Roger Tong's 30 year career has spanned various positions in different industries across the communications sector. He began as an engineer at COM DEV Ltd in Cambridge, Ontario, as one of the founding members of the Space Science Department. From there, he travelled the globe, continuing his career in Asia. In 2008, he joined AsiaSat as Vice President of Engineering and was promoted to CTO in 2016 and CEO in 2018. By constantly challenging prevailing norms on spacecraft design, Roger has been raising the bar in satellite manufacturing. His current interests include developing system concepts and applications for next-generation satellites.

Lawrence Tse, Senior Vice President - Engineering, Inphi Corporation



Lawrence Tse has contributed to the development of integrated circuits and communication systems by advancing design, development, product engineering and testing, and technical management of this R&D. As a visionary leader with a track record of inspiring innovation, Tse understands the intricacies of developing technologies from concept to prototype and into production. He has shown the vision to assemble talent from around the world to create successful engineering teams, expanding engineering R&D within the corporate environment. Tse has been awarded more than 40 US patents in the field of semiconductor integrated circuits that today are integral to our electronic devices.

Nathalie Tufenkji, Professor and Canada Research Chair, McGill University

Nathalie Tufenkji is a Tier 1 Canada Research Chair and Member of The College of the Royal Society of Canada. She is recognized for her exceptional contributions towards sustainable development of nanotechnology, solving problems linked with plastic pollution, and the control of harmful bacteria. Her creative and prolific research activities are recognized with several prestigious awards including the CSChE Hatch Innovation Award. She is very active in public outreach aimed at broadening appreciation for engineering as demonstrated by the global coverage of her discoveries. She is also a respected educator and leader in creating opportunities for women in the profession.

Jennifer Williams, President, Newfoundland and Labrador Hydro

Jennifer Williams has made exemplary contributions to the field of power systems operation, maintenance and leadership. As President of Newfoundland and Labrador Hydro, as well as through her other leadership roles, she has made significant impact in the province, both technical and through her leadership, on the planning for and efficient and reliable generation, transmission and distribution of electricity by hydro plants, thermal plants, and diesel plants, as well as the purchase of electricity from other renewable producers. In addition to her professional leadership roles, Jennifer has contributed significantly to the community through volunteer activities.

Xiao-Ping Zhang, Professor, Ryerson University

Professor Xiao-Ping Zhang is a world-class researcher and an influential entrepreneur. He has substantially impacted the development of multiple areas of research and industrial practices. His extensive research on signal processing theories, methods, and cross-disciplinary applications has significantly advanced the field. A widely recognized and respected leader in engineering communities, he provides exemplary service and has nurtured and inspired a generation of young engineers and researchers. His technology-based business initiatives have fostered the development and formation of AI tools in the burgeoning financial technology industry. He has won many prestigious academic and industry awards. He is an IEEE Distinguished Lecturer.

Joe Zhao, Chief Executive Officer, Chief Scientist, Tri-Y Environmental Research Institute

Dr. Joe R. Zhao is an exceptionally creative engineer with outstanding contributions in innovation, entrepreneurship, and manufacturing. His inventions have addressed some key issues in wastewater treatment and energy conservation. As an entrepreneur, he founded and for over 20 years has led a private-sector laboratory which has provided high-end employment for Canadian engineers and established Canada's leadership in several technologies in fields of critical importance to society. As an engineering leader, he created and guided several successful manufacturing enterprises in Canada and abroad to make his inventions widely available.

Norman Zhou, Professor, University of Waterloo

Dr. Norman Zhou, Canada Research Chair in Advanced Materials Joining and Processing, is an internationally renowned leader in processing of materials such as fabrication of nanomaterials for water treatment and nanodevice assembly, microjoining for electronic and medical implant packaging, and welding of light-weight materials for automotive applications. He has published over 400 refereed journal papers and several books, with Google Scholar citations over 13,000 and an h-index over 60. He has trained over 100 MASc and PhD graduate students and post-doctoral fellows. He has co-founded a successful university spin-off company (Smarter Alloys) with his PhD student Ibraheem Khan.

Peiying Zhu, Senior Vice President, Fellow, Huawei Technologies Canada

Dr. Peiying Zhu is a visionary technical leader who has made fundamental contributions to the design and standardization of the current fourth-generation (4G) and the coming fifth-generation (5G) wireless technologies at Nortel and Huawei Canada. She was the leading figure in driving the industry to adopt the MIMO-OFDM technology into the 4G standard. This achievement had created extraordinary impact not only in the direction of wireless industry but also on our daily lives. Dr. Zhu is a pioneer and a leading expert on 5G technologies. Her innovations have helped transform the wireless industry into the mobile broadband era.

Zheng Hong (George) Zhu, Professor and Academic Director of Research Commons, York University

Dr. Zhu is inaugural Academic Director of Research Commons at Office of VPRI after serving as the Chair for Department of Mechanical Engineering at York University. He holds Tier 1 York Research Chair in Space Technology and is internationally acknowledged as a leader in astronautics, spacecraft dynamics and control, space debris mitigation. He has published over 300 papers and supervised over 100 high qualified personnel. He is College Member of Royal Society of Canada, Fellow of Engineering Institute of Canada, Canadian Society for Mechanical Engineering, American Society of Mechanical Engineers, and Associate Fellow of American Institute of Aeronautics and Astronautics.

Ming Zuo, Professor, University of Alberta

Dr. Mingjian Zuo is an internationally renowned expert in reliability analysis and engineering asset management. His major contributions include realistic reliability models, effective algorithms for early fault detection and diagnosis, and optimal predictive maintenance tools. He has published 230 peer-reviewed papers in top journals and four research monographs and delivered dozens of keynote speeches worldwide. His research output has provided effective tools and methodology for reliability enhancement and reduction of the operating/maintenance costs of engineering assets used in all industry sectors. He has received prestigious awards including EIC Fellow, IISE Fellow, ISEAM Fellow, and Japan JSPS Invitational Fellowship.

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Yong Rui, Corporate CTO and Senior Vice President, Lenovo Group

Dr. Yong Rui is a world-renowned technology leader in both scientific research and turning research into products. A Fellow of ACM, IEEE, IAPR, SPIE, CCF and CAAI, and a Foreign Member of Academia Europaea, Rui contributes significantly to multimedia search and analysis, computer vision, machine learning and their applications. As the Corporate CTO of Lenovo Group and a former leader of Microsoft Research Asia, he holds 62 patents and has shipped commercial products to tens of millions of users worldwide. Rui has been collaborating with Canadian universities including Ottawa and Ryerson for the past two decades.

Tao Zhang, Professor, Dalian Institute of Chemical Physics, Chinese Academy of Sciences

Zhang is nominated due to his conceptual contribution of single-atom catalysis and innovative catalysts for biomass conversion. As one of the most-prominent scientists in heterogeneous catalysis worldwide, Zhang devoted to synthesize low cost metal catalysts for chemical production. The new concept of single-atom catalysis stimulates to discover next-generation of industrial catalysts and promote the understanding to an atomic level. His contributions to the biomass conversion, especially the unique process for cellulose conversion to EG, have evoked intense interests from both academia and industry. Zhang has also actively collaborated with many colleagues in Canada and is leading international collaborations at national level.