



## News Release

### Fifty new Fellows and an Honorary Fellow inducted into the Canadian Academy of Engineering

**Hamilton – (June 4, 2015)** – President Pierre Lortie inducted 50 new Fellows and a new Honorary Fellow into the Canadian Academy of Engineering on June 4, 2015. The ceremony took place in Hamilton, in conjunction with the Academy's 2015 Annual General Meeting and Symposium. Mr. Lortie commented: "We welcome the new Fellows. They are engineers of outstanding abilities. While they have widely varying backgrounds, from Industry and Academe and Government, what they all have in common is the demonstrated desire and ability to go beyond the normal practice of engineering and contribute in exemplary ways towards their fields and to their communities. We expect great achievements through their participation in the Academy's activities. In our past, Fellows of the Academy have produced major studies in the fields of education, energy and innovation; we look forward with boundless anticipation as to how these new Fellows will build upon these good works and explore new and exciting areas of engineering and its impact on public policy." Citations and photographs for each of the new inductees follow.

The Canadian Academy of Engineering (CAE) is the national institution through which Canada's most distinguished and experienced engineers provide strategic advice on matters of critical importance to Canada. The CAE is an independent, self-governing and non-profit organization established in 1987. Members of the CAE are nominated and elected by their peers to honorary Fellowships, in view of their distinguished achievements and career-long service to the engineering profession. Fellows of the Canadian Academy of Engineering are committed to ensuring that Canada's engineering expertise is applied to the benefit of all Canadians.

The Canadian Academy of Engineering works in close cooperation with other senior academies in Canada and internationally. It is a founding member of the **Council of Canadian Academies**, along with the **Royal Society of Canada** and the **Canadian Academy of Health Sciences**. The CAE works in close collaboration with the other members of the **Canadian Engineering Leadership Forum** which brings together representatives from **Engineers Canada**, the **Engineering Institute of Canada**, the **Association of Consulting Engineering Companies - Canada**, the **National Council of Deans of Engineering**, and the **Canadian Federation of Engineering Students**, all working together to ensure a safer, cleaner, healthier and more competitive Canada. The CAE is also a member of the **International Council of Academies of Engineering and Technological Sciences**, which includes some 28 similar national bodies around the world.

**For additional information or interviews, please contact:**

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# NEW FELLOWS 2015

## HONORARY FELLOW

### **Norbert R. Morgenstern**



Dr. Morgenstern has consistently produced internationally award-winning research that has shaped the civil engineering field, specifically in dam design, slope stability studies and major natural resource development. He has been invited to contribute his expertise by research institutions, multinational companies and governments in over 30 different countries on six continents. He has given a significant number of keynote addresses at major international conferences and symposia, and has had 330 manuscripts published in technical journals, conference proceedings and books – an impressive and rare feat for many scholars. An inspiring educator for over 50 years, Dr. Morgenstern has transformed geotechnical engineering as it is taught and practiced in Canada and abroad. Through his leadership and reputation as an international authority on geotechnical engineering, he established one of the leading geotechnical schools in North America, attracting top specialists and talented graduate students from around the world. This award is in recognition of his exceptional contributions and outstanding productivity in education, research and consulting that have profoundly influenced geotechnical engineering practice worldwide, and in recognition of his service to the civil engineering community in Canada and internationally through numerous committees and task forces that have assisted government and professional societies at all levels.

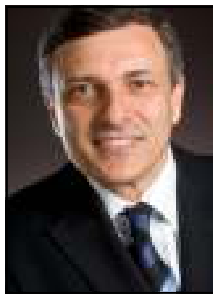
## FELLOWS

**Nicolas Abatzoglou** – Professor, Université de Sherbrooke



Professor Abatzoglou has demonstrated achievements with a very high level of impact in pedagogy, academic management and in industry. His main contributions to academia consist of a restructuring of the chemical engineering program and co-creating the biotech engineering program. As director, the department has seen a dramatic increase in faculty and enrollment. He is recognized as the most popular teacher by students. He developed a very high level research program in collaboration with industry and holds a Chair in pharmaceutical engineering with Pfizer. He is co-founder of two university spin-offs, one of which is Enerkem Technologies Inc., and has extensive expertise in technological transfer.

**Simaan AbouRizk** – Professor, University of Alberta



Dr. AbouRizk has significantly advanced the field of construction engineering, particularly construction simulation modeling and analysis. He is internationally acknowledged as a leader in project planning, productivity improvement, constructability, risk analysis and uncertainty modeling. He is also recognized for his ability to transfer research and development into construction practice. He has published over 300 papers and supervised over 100 graduate students, while balancing his academic endeavours actively consulting on projects focusing on risk analysis and assessment of management systems. He has received wide recognition including election as Fellow of the Royal Society of Canada and the National Academy of Construction.

**Sonia Aïssa** – Professor, INRS, Université du Québec



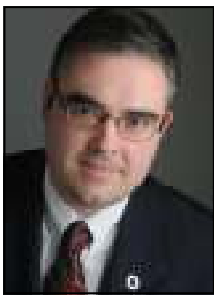
Dr. Sonia Aïssa is highly esteemed as a leading researcher who contributed extensively in expanding Canadian impact in the field of wireless communications, worldwide. Her pioneering work on cognitive radio, multi-antenna systems, cross-layer design and resource management, has been highly influential and enabled advances in engineering design. She is widely published and is known as an extraordinary mentor of graduate students and post-doctoral fellows. Her contributions influence professional practice, also through important governance and organizational posts in IEEE boards and committees which provide strategic leadership to the research community in communications. Prof. Aïssa has often been recognized with national and international awards and distinctions.

**Kim Allen** – Chief Executive Officer, Engineers Canada



When you think of Canada's engineering profession, you think of Kim Allen. Kim has advanced the profession for decades through his efforts to create a globally recognized self-regulation licensure model. Presently CEO of Engineers Canada, the national organization of the 12 associations that license the country's 280,000 members of the profession, Kim Allen has enhanced and subjected professional standards of knowledge, skill, qualification, practice and ethics to public scrutiny to maintain their currency and relevance. His leadership positions provided him a unique opportunity to make a difference for both the engineering profession and society. Kim Allen has done just that.

**Miguel Anjos** – Professor, École Polytechnique de Montréal



Miguel Anjos is Full Professor and Canada Research Chair at Polytechnique Montreal. He is renowned internationally for his research accomplishments in the field of mathematical optimization and its applications in engineering. His research partners include Hydro-Quebec and Schneider Electric Canada. He is Editor-in-Chief of Optimization and Engineering, and serves on the Mitacs Research Council. He is the Founding Director of the Trottier Energy Institute, which promotes the search for sustainable global energy solutions. He received a Humboldt Fellowship in 2009, and the Queen Elizabeth II Diamond Jubilee Medal in 2013 for significant contributions to mathematical optimization and its industrial applications.

**Soheil Asgarpour** – President, Petroleum Technology Alliance Canada (PTAC)



A Fellow of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM), Dr. Soheil Asgarpour has progressed in petroleum engineering through Chief Engineer and Chief Operating Officer ranks, and as government business leader for oil sands to become a recognized and respected leader in collaborative petroleum R&D, as President of Petroleum Technology Alliance Canada (PTAC), which has grown 8-fold under his leadership. Soheil's commitment to engineering technical development is further evidenced by his many years as chairman of the Editorial Board of the Journal of Petroleum Technology, followed by serving as a Director and national Chair of the Petroleum Society of CIM, and as national CIM President.

**Thomas Robert Beamish** – Founder, Director, The Woodbridge Group



Bob Beamish is a Canadian engineer who has worked throughout his very successful 50+ year career to apply his talent and energy for the betterment of Canada and the world through his founding of the Woodbridge Group - an auto parts firm with 8000 employees at 61 plants in 17 countries, and other ventures. He has focussed on environmentally sound businesses that result in strong employment for others. He has shared his success through active charitable works embodied in the WB Family Foundation which has supported major social, medical, mental health and educational endeavours across Canada. Mr. Beamish is a Canadian patriot and visionary who has proudly carried the flag of engineering enterprise high around the world and has been generous in providing help to others who are less fortunate.

**Kamran Behdinan** – Professor, Mechanical Engineering, University of Toronto



Professor Kamran Behdinan is a highly respected leader and innovator in engineering design and design education, as well as internationally renowned researcher in Multiscale Simulation of Nano-structured Solids and Multidisciplinary Design Optimization of Aerospace/Automotive systems. He was the founding Chair of the Ryerson Department of Aerospace Engineering, and the founding Director of both the Ryerson Institute for Aerospace Design and Innovation and the University of Toronto Institute for Multidisciplinary Design and Innovation. He has consecutively held the NSERC Engineering Design Chair at Ryerson and the NSERC Chair in Multidisciplinary Engineering Design at U of T. Professor Behdinan is a Fellow and past President of the Canadian Society for Mechanical Engineering.

**Raouf Boutaba** – Professor, University of Waterloo



Professor Raouf Boutaba is an internationally recognized authority and leading researcher in the management of communication networks and services. He is particularly known for his pioneering contributions to automated and policy-based network management, which opened new exciting possibilities toward self-managing networks and autonomic computing, and for his ground breaking work on network virtualization as a foundation for the future Internet architecture. His research work is published, with high impact, in top-tier IEEE journals and conferences, and received several Best Paper Awards and other national and international recognitions. He is a Fellow of the IEEE and the Engineering Institute of Canada, and the recipient of the 2014 McNaughton Gold Medal.

**Fred Cahill** – President, GJ Cahill & Company Ltd.



Fred Cahill is the President and owner of the Cahill Group which he grew from a small electrical contracting firm started by his father in 1953 to one of the largest multi-disciplinary construction and fabrication companies in Atlantic Canada. The company was named one of Canada's Best Managed Companies for the eighth consecutive year in 2014. Fred serves on the Board of Directors for the Research and Development Corporation, Newfoundland and Labrador Centre for Health Information, Newfoundland Symphony Orchestra, Shaw Group of Companies, and is Chairman of the Genesis Group Inc. Fred was the recipient of NOIA's Outstanding Contribution Award in 2004 and inducted into the Newfoundland and Labrador Business Hall of Fame in 2010.

**Pu Chen** – Professor, University of Waterloo



Recipient of the Premier's Research Excellence Award, and holder of a Canada Research Chair in Nano-Biomaterials, Chen has greatly contributed to theoretical underpinnings and practical applications in low dimensional thermodynamics, interfacial and nanostructure design and fabrication, peptide self/co-assembly, and energy storage and conversion. Peptide biopharmaceutics, drug and gene delivery, protein-lipid membrane interactions, emulsification, coating, plating, thin films, and eco-friendly batteries are special areas of his excellent contributions. His work on peptide mediated short interfering RNA delivery, and rechargeable hybrid aqueous batteries resulted in large scale commercialization. Innovative approaches to biomaterials, new energy sources, and solid-state physics are expected to continue.

**Jordan Chou** – President and CEO, Canadian Power Utility Services Limited



Jordan Chou is the President and CEO of CPUS Limited, an engineering consulting company that contributes to the success of Canada's nuclear industry here and abroad and provides job opportunities for Canadian engineers and other individuals. His technical leadership was instrumental in the development of new control and simulator technologies that were commercialized by Canadian companies for local and foreign markets. He is a strong supporter of the Canadian nuclear industry through membership in the Organization of Canadian Nuclear Industries and the Canadian Nuclear Association (CNA) and is currently a member of the CNA Board, Jordan's outstanding engineering and business accomplishments have been recognized by his peers with several awards.

**Somen Chowdhury – Aerospace Engineering Consultant**



During his 40-year aerospace engineering career, Somen Chowdhury has worked in HAL India and in Bell Helicopter Textron Canada. He has made important contributions that had significant impact. Most notable among these has been the creation of the International Helicopter Safety Team with a goal to reduce civil helicopter accidents by 80 % in ten years starting in 2006. This international initiative resulted in creating other helicopter safety initiatives across the world. This data based approach has helped in developing mitigation strategies resulting in average accident reduction rate worldwide and by 30% in the USA over the last seven years.

**Kenneth Andre Corbould – Deputy Minister, Alberta Transportation**



Andre Corbould is the finest example of an engineer applying his skills in the most challenging circumstances: conflict, natural disasters, reconstruction and international events. His exemplary leadership and engineering skills have made a significant difference to individuals, communities and countries. His 28 year army career culminated as Brigadier General, having led both combat and international reconstruction initiatives in Bosnia and Afghanistan, and he was an integral part of the security effort for the Vancouver Olympics. Mr. Corbould entered the public service of Alberta, leading the planning and execution of recovery efforts following the great flood of 2013, the largest recorded natural disaster in Canadian history. He presently serves as Deputy Minister, Alberta Transportation.

**Tony Dawe – President, Phoenix Engineering Inc.**



Anthony Dawe is a distinguished authority in sustainable mechanical engineering systems design and construction. His experience includes HVAC, fire protection, controls and plumbing systems for many types of commercial buildings. In 2011, the consulting firm he helped build was acquired by an international company who recognized its outstanding reputation in consulting engineering services. Past President of PEGNL and Engineers Canada, Mr. Dawe has led initiatives with the World Federation of Engineering Organizations and Engineers Australia. His professional achievements and exemplary voluntary service were recognized with PEGNL's Award of Merit and Fellowships by Engineers Canada and the Canadian Society of Senior Engineers.

**Greg Evans** – Professor, University of Toronto



Professor Greg Evans is internationally recognized for his leadership and expertise in applying engineering principles to the study of air quality. He has helped found two research networks, the Southern Ontario Centre for Atmospheric Aerosol Research (SOCAAR) and the Canadian Aerosol Research Network (CARN), and engineered instrumentation that has greatly advanced research in this field. Professor Evans has also made outstanding contributions to engineering education, recently leading the development of a graduate program in engineering education at UofT. He has received national and international teaching awards, as well as a Professional Engineers Ontario Research and Development Medal.

**Richard Florizone** – President, Dalhousie University



The diverse career of Dr. Richard Florizone, 11th president of Dalhousie University, has focused on developing partnerships between academia, governments, and corporations on issues of global significance. These collaborations have resulted in the investment of billions of dollars in both the public and private sectors. He has been recruited by some of the world's leading institutions, including MIT, the World Bank Group, Cambridge University, the Boston Consulting Group, and Bombardier Aerospace. His leadership has been recognized with local, regional and national awards, including being a 2015 Top 50 CEO Award Winner by Atlantic Business Magazine and by Saskatchewan Business Magazine as one of the Top Ten Men of Influence in 2009.

**David Haccoun** – Professor Emeritus, École Polytechnique de Montréal



Dr Haccoun is a recognized authority in the theory and applications of error control coding using convolutional codes. His outstanding contributions on powerful coding and decoding techniques have substantially impacted the development of very reliable wireless communication systems. His work on determining the best high-rate punctured convolutional codes has contributed to fundamental simplifications in the development of variable rate communications. He co-invented a class of powerful doubly orthogonal convolutional codes that substantially simplify iterative decoding techniques. He received numerous national and international awards and honours (VTS Award, FIEEE, FEIC, Fessenden Medal). His books have been widely used in academic and professional education.



**Rick Hohendorf** – Director, Components Engineering



Richard (Rick) Hohendorf is the Director of Components Engineering at Ontario Power Generation's (OPG's) Nuclear Business Unit. Rick led the development of the world's first software quality assurance standard for safety critical software that met the requirements of Canada's nuclear regulator. He is responsible for innovative applications of digital computers in reactor safety systems, fault tolerant plant control systems, plant condition monitoring systems, work protection systems and operator display systems at OPG's nuclear power plants. Rick's leadership in the application of digital computer technology has led to improvements in the performance and safety of CANDU nuclear power plants both in Canada and in foreign countries.

**Guohe Gordon Huang** – Professor and Canada Research Chair Tier 1, University of Regina



Professor Huang developed innovative optimization approaches to tackle complexities of environmental risk management that are beyond direct human reasoning. His work led to a new field of inexact environmental systems analysis uniquely useful for multi-stakeholder risk management practices. His findings revealed various complexities in environmental systems and obstacles hindering sustainable regional development. They were introduced by multiple international development agencies to a number of countries and frequently used by peers/stakeholders, bringing about enormous socio-economic benefits. His contributions were disseminated through publication of over 700 journal papers (H-index 45 in Science Citation Index), training of over 100 graduate students, and special conference panels/sessions devoted to his works.

**Fassi Kafyeke** – Senior Director Strategic Technology and Advanced Product Development, Bombardier Aerospace



Fassi Kafyeke joined Bombardier in 1982 as an Aerodynamics engineer. Manager of Advanced Aerodynamics since 1996, he led the aerodynamic design and the development wind tunnel testing of the regional jets CRJ700/900/1000, the business jets Global Express and Challenger 300 and the main line jet CSeries. He led Bombardier Aerospace Research and Technology since 2007 and Advanced Product Development since 2014. For many years, he taught Aerodynamics at universities and he has been active in the Aerospace community, serving on boards of several provincial and federal organizations (CASI, GARDN, SA2GE, CRIAQ, COMPUTE CANADA, and CARIC).

**Innocent Kamwa** – Chef Expertises - Réseaux électriques et Mathématiques, Institut de recherche d'Hydro-Québec(IREQ)



The key differentiator of Dr. Kamwa's work is his outstanding contribution to industrial technology while influencing engineering science as well. His work has high impact in the following areas: 1) power system stability where he developed advanced intelligent algorithms implemented at large scale in the industry for static excitation systems, 2) Smart grid concepts for power transmission systems where he developed intelligent automatism for blackouts prevention. He has demonstrated high level of leadership in the profession as editor-in-chief and educator. His pioneering research in power grid control is documented in numerous peer reviewed highly cited articles in IEEE Transactions.

**Joshua Leon** – Dean, Faculty of Engineering, Dalhousie University



Dr. L. Joshua Leon, Dean of the Faculty of Engineering at Dalhousie University, is a Canadian engineer who has provided strong research and educational leadership in the fields of biomedical and computer engineering. He has championed the redevelopment of Canada's high performance computing research infrastructure and has made important and pioneering research contributions through his work on; 1) the electrical activity of the heart; and, 2) in the development of the new field of general purpose graphical processing computing. He has also made significant contributions to engineering education by promoting the importance of design education and learning outside of the classroom.

**Charles X. Ling** – Professor, Computer Science Department, Western University



Dr. Ling is an internationally well-known scholar and leader in machine learning, data mining and big data analytics, and applications of data mining. In recent years Dr. Ling led his team to create a novel platform for people with Type 2 diabetes, called GlucoGuide, via the use of data mining, software engineering, and mobile technologies. A clinical trial with diabetic patients showed very positive result. He is founder and CEO of a start-up company, which strives to bring benefit to the millions of people with diabetes, and reduce medical costs for corporations and insurance companies.

**Jamie Long** – President, Hibernia Management and Development Co. Ltd.



As President of the Hibernia Management and Development Company (HMDC), Jamie Long is responsible for the management of an oil facility unlike any other in Canada. The field, located 300 km offshore Newfoundland, produces 120,000 barrels of oil a day and is a key driver of the regional economy. Under his guidance, HMDC has invested \$30M to enhance the skills, interest and knowledge of students in the province in the areas of science, technology, engineering and math. Jamie supports many worthwhile charities such as Team Broken Earth, Ride for Dad, Spin for Kids, the Autism Society, Newfoundland Symphony Orchestra, the United Way, and is a member of the Professional Engineers and Geoscientists of Newfoundland and Labrador.

**Leonard Lye** – Professor, Memorial University of Newfoundland



Dr. Leonard Lye, PEng, FEC, FCSCE, Professor of Civil Engineering and Associate Dean in the Faculty of Engineering and Applied Science at Memorial University of Newfoundland, is an inventor, entrepreneur, and mentor. His inventions have been commercialized and are being used worldwide by universities, professional coaches, and international companies. He established an innovative charity for which he was honoured with a Lifetime Achievement award. He has won multiple awards for teaching and community service including the PEGNL Community and Teaching Awards and Fellowships by Engineers Canada and the Canadian Society for Civil Engineering. As an academic, he has mentored over 30 graduate students and published over 120 papers in journals and conferences.

**Robert Magee** – Chairman, The Woodbridge Group



Bob Magee is a successful Canadian engineering executive who has worked hard to create a career and personal development opportunities for others through his work with the Woodbridge Group; having started as a co-op student and now serving as Chairman of the Board of this 8000 employee global firm. Besides his own success, Magee has founded and given generously to a wide array of visionary programs dedicated to bettering Canadian engineering education and the development of technical people through his work with the Yves Landry Foundation, the Council for Automotive Human Resources and his work as an advisor to the Deans of Engineering of McMaster and Waterloo universities. He is the first executive to be called when support of a people-related cause is needed and he always comes through.

**V. Mohan Malhotra** – President, Supplementary Cementing Materials, Inc. (Retired)



One of the most recognized names in the international construction circles, Dr. V. Mohan Malhotra is a world leader in the field of cement and concrete technologies. In recent years, he has been active on the issues involving global warming and sustainability. The international learned societies and agencies have recognized his contributions in this important area of sustainable issues and he has been honored with numerous prestigious awards. Recognized by the American Concrete Institute as Ambassador to the World, Dr. Malhotra has sponsored, organized and conducted more than 50 international conferences on concrete and cement technology world-wide.

**Horacio J Marquez** – Professor, University of Alberta



Professor Marquez is a world-class expert in robust and nonlinear filtering and control. His research has been well recognized by the international peer community and has made impact in the oil and gas industry in the Northern Alberta region. During his leadership as Chair of Electrical and Computer Engineering (ECE), his Department grew from mid-size to one of the largest research intensive ECE departments in the country. He has provided effective service as President of the Canadian “Chairs and Heads of Electrical and Computer Engineering,” and the US ECE - Department Heads Association, and Chair of NSERC Grant Selection Committees. He is a Fellow of the Engineering Institute of Canada and IET.

**Sushanta Mitra** – Professor & Chair Mechanical Engineering, York University



Dr. Sushanta Mitra is a visionary leader and a researcher who has made significant impact on the society through successfully merging the fundamental knowledge of fluid transport in micro/nano-systems with applications in energy, environment and bio-systems. His innovative efforts and works have opened up new avenues for translational research. His visionary leadership on bilateral relations between Canada and India in post-secondary education and research has created significant collaborative opportunities for researchers and students of both countries. For his exceptional contributions in science and engineering in Canada and globally, he has been elected as the Fellow of CSME, EIC, ASME and RSC.

**Osama Moselhi** – Professor of Engineering, BCEE Department, Concordia University



Professor Moselhi is an engineer and scholar who made significant contributions to practice and research, in engineering and construction in Canada, the United States, Egypt and Saudi Arabia. He contributed to training of leaders in industry and in academic institutions of higher learning in Canada, the United States, and in other countries in the middle-east and the far-east. He authored and coauthored over 350 scientific publications and received numerous awards and recognitions, including the Walter Shanly Award of the Canadian Society for Civil Engineering in recognition of "Outstanding contributions to the development of and practice of construction engineering in Canada ", and the prestigious Tucker-Hasegawa Award.

**Zahra Moussavi** – Director, Biomedical Engineering Prog., Department of Electrical & Computer Eng., University of Manitoba



Dr. Zahra Kazem-Moussavi has used her vast knowledge to produce ground-breaking research to improve the lives of others. Most recently she has been working on early diagnosis and treatment of Alzheimer's disease and dementia, and has established the only repetitive Transcranial Magnetic Stimulation (rTMS) centre for treatment of the disease in Canada. Lately, she has also started a memory program for people of age 60+ with memory problems, called "Soroor Memory Series".

These pioneering programs have made Manitoba a unique, world-class centre of research for Alzheimer's. As a full professor at the University of Manitoba, as well as a Canada Research Chair in Biomedical Engineering, Dr. Zahra Kazem-Moussavi has served as a role model, particularly for her female students.

**Natalia K. Nikolova** – Professor, McMaster University



Professor Natalia K. Nikolova has made outstanding contributions to the global advancement of the theory and applications of microwave engineering. Most notably, her pioneering work on response sensitivity analysis enabled drastic acceleration of the design optimization of high-frequency structures in the framework of electromagnetic simulation software. Her innovations in microwave imaging and detection enabled applications in medical diagnostics and security systems, which are expected to bring important benefits to our society in the near future. Professor

Nikolova has a long record of outstanding service in promoting the Canadian engineering profession at home and abroad as well as promoting the engineering profession among women.

**Vladimiros Papangelakis** – Professor, University of Toronto



Using novel experimental techniques coupled with mathematical modeling, Professor Vladimiros G. Papangelakis has made significant contributions to the development of hydrometallurgical processes. He developed the first comprehensive model simulating the autothermal operation of reactors for the pressure oxidation of refractory gold ores and pioneered the concept of “chemistry at temperature” to probe and understand the behaviour of high-temperature processes, particularly for nickel extraction from nickeliferous laterites. Recognized internationally, he made sustained contributions to the engineering profession and through his leadership within technical societies, including service as President of the Metallurgy and Materials Society of the Canadian Institute of Mining, Metallurgy and Petroleum (CIM) .

**Ash Parameswaran** – Professor, Simon Fraser University



An exemplary teacher who has inspired thousands of students through his lectures in electrical engineering, Dr. Ash Parameswaran is internationally renowned for his research in micro-systems technology. His passion to serve the society through engineering innovation has led to the development of a novel “lab-on-a-chip” device for pathogen detection. His work allows clinics in rural communities early diagnosis and treatment of diseases, such as infant diarrhea. In 2013, he earned the Meritorious Achievement Award from APEGBC in recognition of his outstanding contributions. Other recognitions include the APEGBC Teaching Excellence Award, SFU Teaching Award, Wighton Fellowship from the Sandford Fleming Foundation and a Stars in Global Health Grant from the Government of Canada.

**Mihriban Pekguleryuz** – Professor, McGill University



Dr. Pekguleryuz's engineering career has spanned 12 years in Canadian industry and 15 years in university where her creative and innovative research in light metal alloys has directly resulted in commercially successful products with significant impact to reduce environmental pollution. She developed Noranda's magnesium engine alloy used on all BMW models since 2004 and established a high profile for Canada in Mg materials research taking active role in numerous industrial international/national projects, light metals programs and committees. In academia, she held two industrial research chairs, with Rio Tinto Alcan at UQAC and with General Motors of Canada at McGill.

**Michel J. Pettigrew** – Principal Research Engineer (Emeritus), Canadian Nuclear Laboratories



Michel J. Pettigrew is an internationally renowned expert in Flow-Induced Vibration and Related Damage. He has demonstrated exceptional creativity and leadership in his field of vibrations in nuclear components, initially while at AECL Chalk River and subsequently as NSERC/AECL/BWC Industrial Research Chair at École Polytechnique de Montréal. He has published over 360 technical papers and reports and his design guidelines for avoiding damaging flow-induced vibrations in nuclear components, such as steam generators and fuel, are used worldwide. His work was instrumental in making CANDU nuclear steam generators amongst the most reliable in the world and for helping Babcock and Wilcox Canada become a leading world supplier of this type of equipment.

**Federico Rosei** – Professor and Director, Institut National de la Recherche Scientifique



Federico Rosei has made a number of seminal contributions in materials engineering, including quantifying intermixing in Group IV semiconductors, nanostructuring surfaces to improve biocompatibility, controlled patterning of functional materials and their integration in devices. His work has been recognized through multiple awards and distinctions, including Fellow of the Royal Society of Canada, the European Academy of Sciences, the Engineering Institute of Canada, APS, AAAS, and SPIE, and through the award of the Steacie Fellowship (NSERC) and Bessel Award (Humboldt Foundation) among others. He also had a major impact in mentoring trainees, by fostering diversity and developing a graduate course as a career guide for young professionals.

**Anne Sado** – President, George Brown College



Anne Sado is not just a prominent leader in business and academia; she is a dedicated leader in the community, whose ideas, energy and integrity extend her influence across the public and private sectors and make her an outstanding role model for young women. Trained as an engineer at the University of Toronto, Anne Sado had a successful 25 year career at Bell Canada before her appointment as President of George Brown College in 2004. In this role, she is spearheading initiatives that are transforming post-secondary education in Ontario. Ms. Sado received the Ontario Professional Engineers Gold Medal in 2007 and was inducted into the Order of Canada in 2013.

**Michael V. Sefton** – Professor, University of Toronto



Professor Michael Sefton is a pioneer in the field of tissue engineering. A leader in his professional community, he served as President of the U.S. Society for Biomaterials from 2005-2006 and has spearheaded several programs to advance the field, such as the Toronto Tissue Engineering Initiative. From 1999-2005, Dr. Sefton was director of the Institute of Biomaterials and Biomedical Engineering at U of T, leading its development into one of the best institutes of its kind in North America. His many honours include the Ontario Professional Engineers Gold Medal, the Engineers Canada Gold Medal and the Killam Prize in Engineering.

**Nariman Sepehri** – Professor, University of Manitoba



Nariman Sepehri, Fellow ASME and CSME, is an expert in the engineering field of fluid power systems and control. He is a leader in detecting system faults and merging them with control corrections to create a self-healing approach in safety critical applications. He has published over 100 journal articles, is holder of five patents and co-author of a textbook on Hydrostatic Actuation. He has allocated a good portion of his time to serve technical societies, most notably as Chair of the ASME Fluid Power Systems and Technology Division. He was involved in the organization of over 60 international conferences and has served on editorial boards of eight journals.

**John Thompson** – President, Blue Banjo Investment Inc. (Retired)



John M. Thompson has been a leading innovator in the information technology sector in Canada with worldwide impact through his career. He has been a champion of technological innovation and leading change in large organizations. In particular, he has fostered the linkage between industry and academia in practice and research. His leadership has been shown through university governance appointments and his leadership and philanthropic support for the Hospital for Sick Children. Mr. Thompson has provided advice and leadership to groups such as the Canadian Business Council, the Corporate Higher Education Forum, and the Conference Board of Canada. His leadership and contributions to Canada were recognized with the Order of Canada in 2013.



**Wen Tong** – CTO Huawei Wireless, Huawei Technologies Canada Co. Ltd.



Dr. Wen Tong, Head of Communications Technologies Global Laboratories of Huawei, is a world recognized pioneer and leader in the research and development of wireless technologies, whose breakthroughs and innovations have shaped industry in the standardization of third generation (3G) and fourth generation (4G) global wireless standards and generated huge economical and societal impact as billions of people are benefiting daily from 3G/4G wireless networks by enjoying ubiquitous Internet access at unprecedented speeds. His technical contributions and leadership have been recognized with Fellowships of IEEE, Nortel and Huawei as well as two Nortel Technology Excellent Awards.

**James S. Wallace** – Professor, University of Toronto, Dept. Mech. & Ind. Engr.



Jim Wallace is a professor and former Chair in the Department of Mechanical and Industrial Engineering at the University of Toronto. An internationally recognized researcher in the area of alternative fuel use in internal combustion engines, he has contributed significantly to the advancement of knowledge in this field. Professor Wallace's innovative research on natural gas and hydrogen led to his election as a Fellow of SAE for advancing the use of alternative fuels for emissions reductions. He is also a Fellow of CSME and EIC. An outstanding educator, Professor Wallace has won U of T's highest teaching award, as well as the Ralph R. Teetor Educational Award from SAE.

**Quan Wang** – Professor, Department of Mechanical Engineering, Univ. Manitoba



Dr. Quan Wang is a Professor in structural mechanics. He has made outstanding contributions in applications of nano-materials in composites and sensor designs. He is also a world leading expert in smart materials and structures and applications in energy harvesting, structural health monitoring, and repair. He has published around 200 research papers in internationally referred journals with high citation counts. He has played various active roles in and contributed to research, education, and public services. Because of his substantial contributions and leadership in the engineering profession, Dr. Wang has been elected to be a fellow of ASME, ASCE, and IOP.

**Huining Xiao** – Professor, University of New Brunswick



Dr. Xiao has made significant contribution to polymer and pulp & paper science and engineering. His research on multidisciplinary areas is unique and enables his to develop various cutting edge technologies that have remarkable benefit to industries. The various functional polymers/nanoparticle systems Dr. Xiao developed not only addressed the issues related to industrial demands from a fundamental point of view, but also are implementable and feasible for commercialization. Apart from the excellent track record of research in terms of the number and quality of publication, Dr. Xiao's research achievements have also been demonstrated by his leadership in NSERC strategic networks.

**Gu Xu** – Professor, Department of Materials Science and Engineering, McMaster University



Dr. Gu Xu is recognized for his innovative solutions, bridging fundamental science and creative engineering, to many critical and long standing problems, including the revelation of organic memory mechanism, and the elucidation of degradation in organic light emitting devices that enabled their commercialisation. In addition, hydrogen storage saturation was uncovered to clarify the controversy, and lateral structure of multiwall nanotubes was resolved by his novel X-ray imaging methods. The discoveries were mostly published by leading science and engineering journals, which were cited extensively.

**Ming Yu** – Chief Scientist & Director of R&D, COM DEV International



Dr. Ming Yu, Chief Scientist and Director of R&D, COM DEV International, also Adjunct Professor at University of Waterloo, has made major contributions to the advancement of computer-aided design and tuning of microwave filters and multiplexers. The software he developed has enabled COM DEV to transform its hardware design from empirical approaches to accurate modeling with first pass success. He is the driving force of many innovations, such as temperature compensated multiplexers, predistorted microwave filter and automatic tuning robots. These are among his many contributions that have allowed COM DEV to remain as an international leader in space technologies.

**Hong Zhang** – Professor, University of Alberta



As an NSERC Industrial Research Chair since 2003, Professor Zhang is a world leading expert in applying image processing to process monitoring and performance evaluation in oil sands mining, an industry of vital importance to Alberta and Canada's economy. In the international robotics community, Professor Zhang is well known for his seminal work in collective robotics mapping behaviors of social insects to control algorithms of robots, and an exceptional record of service. His outstanding contributions have been recognized through prestigious awards including the IEEE Fellow and Millennium Medal, the Syncrude/ASTech Innovation in Oil Sands Research Award, and the Canadian Information Processing and Pattern Recognition Society Award.

**Qi-Jun Zhang** – Professor, Carleton University



Dr. Q.J. Zhang, Professor, Carleton University, advanced the theory and practice of active and passive computer-aided design with innovations in linear and nonlinear device modeling and circuit optimization for which he received the IEEE Fellowship. His contributions to sensitivity analysis, design optimization, and knowledge-, neural network- and electromagnetics-based modeling of microwave devices and circuits allowed radio-frequency and microwave designers to conquer prohibitive design tasks. His innovations have globally impacted commercial and military design technologies for satellite and terrestrial communication circuits, including wireless and wireline links, as well as modeling and fabrication of semiconductor devices involving electrical, electromagnetic and thermal effects.

