The Canadian Academy of Engineering

L'Académie canadienne du génie

Media Release

Fifty-six new Fellows elected into the Canadian Academy of Engineering

Ottawa – (11 May 2026) – President Catherine Karakatsanis announced the election of fifty new Fellows and six new International Fellows into the Canadian Academy of Engineering on May 11, 2026. The announcement is made in conjunction with the Academy's 2026 Annual General Meeting which was held by video conference. The Induction Ceremony is scheduled for June 1, 2026, in Edmonton, Alberta.

Ms. Karakatsanis commented: "I am delighted to welcome the new Fellows to the Academy whose impressive accomplishments and leadership in their respective fields have significantly advanced engineering in both Canada and around the world. Their outstanding contributions and dedication to excellence serve as an inspiration to us all." Citations for each of the new inductees follow.

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

The Canadian Academy of Engineering works in close cooperation with other senior academies in Canada and internationally. The CAE is a founding member of the Council of Canadian Academies (CCA), and a member of the International Council of Academies of Engineering and Technological Sciences (CAETS), which includes 31 national engineering academies around the world. The CAE is also a member of the Partnership Group for Science and Engineering (PAGSE), an association of more than 20 Canadian organizations in science and engineering, whose mandate is to educate and inform federal Parliamentarians, decision makers and other leaders of the importance and significance of Canadian research and innovation to economic development, and society as a whole.

For additional information or interviews, please contact:

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NEW FELLOWS 2026

Brian Amsden, Professor, Queen's University

Dr. Brian Amsden is Associate Vice-Principal Research, the Donald and Joan McGeachy Chair in Biomedical Engineering, a Professor in and the former Head of Chemical Engineering at Queen's University. Considered an expert in the design of innovative polymer biomaterials he is recognized internationally for his work on the development of novel drug delivery and tissue engineering/regenerative medicine strategies aimed at overcoming medical challenges and providing improved patient outcomes. Moreover, he has provided significant leadership to the Canadian and international biomaterials community. He is a Fellow Biomaterials Science and Engineering and of the Engineering Institute of Canada.

Chadi Assi, Professor, Concordia University

Dr. Assi is a distinguished engineer and educator in telecommunications and cybersecurity. He conducted pioneering research in resource allocation in optical and wireless networks, earning him the IEEE Fellowship in 2020. He led research securing the EV charging ecosystem, influencing industry practices and public policy. He trained over 35 Ph.D. and 55 MASc students, served as graduate program director, and graduate program director, and contributed to curriculum development. He published over 500 publications garnering nearly 20,000 citations. His developed technologies have been adopted by Hydro Québec and Ericsson, demonstrating exceptional societal and technological impact.

Dingrong Bai, Chief Scientist, Ordos Industrial Laboratory

Dr. Dingrong Bai is an internationally acclaimed leader in fluidization science and clean energy, renowned for research excellence and translating fundamental science into transformative industrial technologies, including ReEngineered Feedstockâ„¢ (ReEF) and ultra-high-temperature fluidized bed systems. As a visionary technical and organizational leader, he has directed multimillion-dollar R&D programs and multicultural teams spanning academia, industry, and government. Through professorial and executive roles in Canada, USA, China, and Japan, he has mentored numerous engineers who now drive innovation and sustainability globally. With over 170 publications, four book chapters, and 60 patents, Dr. Bai has advanced fluidization science and its industrial applications.

Timothy Barfoot, Professor, University of Toronto

Dr. Timothy Barfoot, Professor at the University of Toronto, is a leading researcher in mobile robot navigation. His research has found application in self-driving cars, mining, space exploration, the military, and agriculture. He takes his ideas all the way from theory to novel field tests to facilitate their transfer to industry. Dr. Barfoot is the author of "State Estimation for Robotics", a popular book on core robotics algorithms used by educators and industry practitioners. He co-founded the UofT Robotics Institute and the UofT undergraduate robotics major. He is a Fellow of the Institute of Electrical and Electronics Engineers (IEEE).

Jean Bélanger, Président et chef de la direction, Premier Tech

Jean Bélanger a fait grandir une entreprise régionale spécialisée à l'origine dans les produits à base de tourbe en une multinationale en innovation regroupant aujourd'hui plus de 6000 équipiers. Premier Tech rayonne maintenant mondialement dans les secteurs de l'automatisation, de l'environnement, du numérique et des sciences de la vie. Passionné par l'intrapreneuriat et les talents, Jean Bélanger est reconnu comme un modèle inspirant de leadership pour les ingénieurs. Il a été honoré de l'Ordre national de la Légion d'honneur, de la médaille d'honneur de l'Assemblée nationale du Québec, du prix Mérite de Polytechnique et d'un doctorat honorifique de l'Université Laval.

Girma Bitsuamlak, Professor/Director, Western University

Dr. Girma Bitsuamlak is an internationally recognized leader in wind engineering and the effects of climate change on the resiliency of infrastructure. His contributions have advanced the scientific literature, building codes and practice of building design, by using both experimental methods and computational modeling to improve our understanding of the infrastructure requirements necessary to withstand the effects of extreme wind events, adapt to climate change and optimize building energy efficiency. He is leading the unique WindEEE research institute that has hundreds of partnerships with researchers and funding organizations from around the world in wind engineering, energy and environment.

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Miriam Capretz, Associate Dean, Research (Engineering) and Professor, Software Engineering, Western University

Professor Capretz, a distinguished researcher in AI-driven energy systems and Associate Dean, Research at Western Engineering, has made important contributions to the energy sector through her work in machine learning and smart meter analytics, informing Canadian energy policy. Her research has earned international recognition through fellowships and awards from leading institutions. In addition to her research achievements, she is dedicated to advancing engineering education, fostering an inclusive and innovative environment that prepares students for future industry challenges. Her academic leadership, transformative impact on sustainable engineering, and dedication to advancing the profession underscore her exceptional influence and commitment to engineering excellence.

Paul Chabot, Managing Director, Nemaska Lithium

Over a distinguished 35-year career with three world-class organizations, Paul has demonstrated visionary leadership in advancing transformative engineering projects of global significance. His achievements are culminating in the creation of Canada's first fully integrated lithium hydroxide production facility - a landmark contribution to the nation's energy transition. A pioneer in the industrial application of emerging technologies across the lithium chemicals and industrial gases sectors, Paul has consistently delivered innovations with lasting societal and environmental impacts. His work has strengthened Canada's position as a global leader in sustainable industrial development and inspired a new generation of engineering professionals.

Fred Dermarkar, President and CEO, Atomic Energy of Canada Ltd

Fred Dermarkar, P.Eng., is President and CEO of Atomic Energy of Canada Limited, overseeing Canada's nuclear laboratory, reducing federal research-related radioactive waste liabilities and optimizing CANDU intellectual property. As CANDU Owners Group President and CEO (2014-2020), he strengthened collaboration among operators of 47 CANDU reactors globally, expanded membership, research programs and strategic mandate. His 33-year Ontario Power Generation career included post-Fukushima leadership and reactor physics innovations. Recipient of the Canadian Nuclear Society Ian McRae Award and the World Association of Nuclear Operators Excellence Award, Fred is recognized for advancing nuclear safety, fostering Indigenous partnerships and strengthening Canada's nuclear leadership.

Mélissa Després, Director Research and Development, Industrial Materials Innovation Centre, National Research Council

Mélissa Després is a materials engineer who has significantly contributed to transportation industries. As the Director of Research and Development for Materials and Processes at the National Research Council of Canada, she leads experts to solve the most pressing challenges in materials engineering. Early in her career, her work on powder injection molding revolutionized manufacturing aircraft engine components at net shape and low costs. Mélissa's leadership on vehicle lightweighting and advanced manufacturing research resulted in technological leaps, bringing competitiveness and sustainability that transformed Canadian manufacturing firms. She has built unprecedented R&D networks that overcame traditional silos to achieve astonishing success.

Tohid Didar, Professor, McMaster University

Dr. Tohid F. Didar, Professor of Engineering at McMaster University, is a global leader in bio-inspired materials and diagnostic technologies. His interdisciplinary research merges nanotechnology and materials science to tackle antimicrobial resistance, food safety, and women's health. He has developed biomaterials to prevent infections, biosensors for real-time food monitoring, and wearable devices advancing women's health. A Fellow of the Canadian Academy of Health Sciences and NSERC A.B. McDonald (Stacie) Fellow, he has co-founded startups and licensed over ten technologies to industry, reinforcing Canada's leadership in engineering innovation, health technologies, and sustainable solutions.

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Mamadou Fall, Professor and Chair of the Department of Civil Engineering, University of Ottawa

Professor Mamadou Fall, Chair of Civil Engineering at the University of Ottawa, is a leading authority in geotechnical and geoenvironmental engineering. He pioneered sustainable cemented backfill and developed Multiphysics tools used by industry and regulators to design safer tailings structures, deep geological repositories, and clean-energy foundations. As Chair, he expanded research capacity and advanced bilingual, inclusive engineering education. Author of 325+ publications, he has mentored over 100 graduate researchers. His innovations and leadership - recognized by the John B. Stirling Medal, Distinguished University Professor, and Fellowship of the Engineering Institute of Canadaâ€"have significantly shaped engineering practice in Canada and internationally.

Pedram Fatehi, Professor and Director, Lakehead University

Professor Pedram Fatehi is a leading Canadian researcher in biorefining and sustainable materials engineering and serves as Director of the Biorefining Research Institute at Lakehead University. He has led 30+ major projects, secured >$11 million in research funding, supervised over 90 graduate students and postdoctoral fellows, mentored junior faculty, and published 350+ refereed papers with 12,000 citations. His patents and 50+ industrial partnerships have driven the commercialization of green processes that reduce petrochemical use, water consumption, and emissions. A strong advocate for EDI, Dr. Fatehi's transformative leadership has strengthened Canada's global standing in sustainable technologies and the circular bioeconomy.

Robert Francki, Global Managing Director - Infrastructure - Transportation, Water & Defence, Hatch Ltd

Robert Francki is Hatch's Global Managing Director, Transportation and Water. Over four decades, he has held progressively more senior roles across Canada, Africa, Australia and Latin America, driving innovation in engineering, project delivery, and business strategy. Robert's leadership helped expand Hatch from a Canadian firm to a worldwide enterprise. He has led numerous highly complex projects, pioneered modular construction methods, and championed mentorship and education initiatives. His contributions have been recognized with numerous engineering awards and recognition for advancing the engineering industry.

Hongsheng Guo, Principal Research Officer, National Research Council Canada

Dr. Hongsheng Guo is a globally recognized expert in clean combustion technologies. His discovery of mechanisms for low/zero carbon fuel combustion and soot formation have enabled groundbreaking progress in finding new solutions to reduce emissions in heavy-duty freight industries. Dr. Guo's contributions enabled industries to adopt clean combustion technologies and overcome critical challenges, such as reducing fuel slip and pollutants. He is responsible for advocating and leading the federal government's program on fuel switching, which solidified Canada as a leader in the field. He has established enduring multidisciplinary partnerships that transcend borders, continuing to work towards a sustainable future.

Nessim Habashi, President Founder, Cogerec Consultants Ltd.

Nessim Habashi is an exceptional civil engineer whose career spans landmark hydroelectric and infrastructure projects in Canada's North and Montreal. Rising rapidly to senior leadership, he earned distinction as one of Canada's most respected mediators, arbitrators, and engineering economists in multi-million-dollar construction disputes. As founder of Cogerec Consultants, he built a firm internationally recognized for its expertise in project management, claims analysis, and dispute resolution. Sought after by governments, corporations, and law firms, Mr. Habashi's technical mastery, integrity, and fairness have left a profound impact on engineering practice, legal precedent, and the advancement of Canada's construction industry.

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David Harquail, Chair Emeritus, Franco-Nevada Corporation

David Harquail is a visionary Canadian mining entrepreneur whose career spans 4 decades of transformative leadership. As CEO/Chair of Franco-Nevada, he scaled royalty/streaming financing, enabling the development of mines while advancing sustainability and governance. He contributed to global ESG requirements and Canadian disclosure standards, mentored and advocated for diversity, and contributed generously to engineering education, health care, and children's charities. Notable recognition includes University of Toronto's Alumni Hall of Distinction, CIM's Robert Elver Award, CIM's President's Medal, and Canadian Mining Hall of Fame inductee. David's career exemplifies innovation, leadership, and societal impact, making him a well-deserving candidate of CAE's Fellowship.

Dimitrios Hatzinakos, Professor, University of Toronto

Dimitrios Hatzinakos, a Fellow of IEEE and Engineering Institute of Canada, has established Canada's leading research ecosystem in Biometrics and security, with pioneering innovations in multimedia signal processing, security, communications and Biometric systems. He has held the Bell Canada Chair in Multimedia (2004-2014), directed the Identity, Privacy and Security Institute (since 2009) and founded the Biometrics Security Laboratory at the University of Toronto, training over 80 graduate students. He received the University of Toronto 2012 Inventor of the Year Award and was recognized in the top 2% of scientists by Stanford University (2020), with over 17,000 citations and 380+ papers.

Nannette Ho-Covernton, Executive Director, The ETC Foundation

Nannette Ho Covernton is a distinguished leader in engineering and sustainability with a transformative impact on both academia and industry. She has been recognized with awards from the Schulich School of Engineering and APEGA, highlighting her contributions to the field. As an avid volunteer, she co-leads the Digital Oil and Gas Theme at CRIN and is a PTAC board member, driven by making an impact with innovation and digital transformation. She extends herself to additional roles with the University of Calgary and SAIT MacPhail School of Energy, where she has inspired future engineers, technologists and leaders

Zhengyu (Alex) Hu, Managing Principal, GLAE

Mr. Zhengyu 'Alex' Hu is internationally recognized as a leading expert for his eminent contributions to structural engineering. A Fellow of ASCE, SEI and IStructE, he is the first-ever ASCE Governor leading Central Canada Section and the co-founder of GLAE, an emerging multidisciplinary engineering consulting firm. He has delivered numerous award-winning, iconic structural designs worldwide, and serves on top-tier engineering codes and standards committees globally, including ASCE 7 and NEHRP Seismic Provisions in the U.S., CSA S16, and Chinese seismic design code GB50191. As a Springer Nature editor and author, his expertise shapes engineering practice across North America and beyond.

Guoliang Huang, Professor, Peking University

Dr. Guoliang Huang is an internationally renowned researcher, educator, and engineering innovator in mechanical metamaterials and structural dynamics. His pioneering contributions have led to the generation of new knowledge and enabled groundbreaking technologies in low-frequency vibration isolation, broadband sound silencing, and self-learning materials. His research has had direct impact on solving engineering problems through collaboration with industry, which have led to commercial success. He holds numerous international patents, has received distinguished awards from leading academic societies, and serves in leadership roles for leading journals in his discipline. His mentorship has inspired numerous students who have excelled in academia and industry.

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Hans-Arno Jacobsen, Tier 1 Canada Research Chairs in Data-Intensive Systems, University of Toronto

Professor Jacobsen is an internationally renowned scholar in distributed systems and data management. He is particularly known for his groundbreaking contributions to distributed event-based and publish/subscribe systems, widely used in enterprise and Internet-scale settings. He also conducts research on quantum computing, especially distributed quantum computing, and has served as Scientific Director of the Quantum Software Consortium of Canada. He has held leadership roles in major international conferences and is widely published in top IEEE/ACM venues. He has received Best Paper and Test-of-Time awards and is a Fellow of the IEEE.

Martin Jobke, President & CEO, ASSOCIATED ENGINEERGING

Martin Jobke is the President & CEO of Associated Engineering (AE). AE is a Canadian, employee-owned consulting firm known for its partnerships with Indigenous communities and engineering innovation in projects. Martin's leadership has earned the firm 17 years of Canada's Best Managed Companies Award and many annual technical awards, including the Canadian Consulting Engineering Award of Excellence. In both 2024 and 2025, Business in Vancouver recognized Martin as one of the 500 most influential Business leaders. Martin has led innovations in EIT training, employee engagement and mentoring at AE. He also volunteers in youth sports in his community.

Joey Jung, Executive Director, Kemetco Research Inc.

Dr. Joey Chung-Yen Jung, a BC registered P.Eng., has 25 years of R&D experience in mining, fuel cells, and batteries. He holds 49 patents, authored two books, 42 peer review papers, and over 200 technical reports. The work by Dr. Jung and his team has earned the Silver Medal from Geneva Inventions in 2022. As the Executive Director at Kemetco Research, he leads 43 engineers and scientists and has participated more than 350 projects. As a founding member and Vice President of The International Academy of Electrochemical Energy Science, he has promoted collaboration, advancing sustainable technologies and addressing environmental challenges.

Gunes Karabulut Kurt, Professor, Polytechnique Montréal

Gunes Karabulut-Kurt, ing., P.Eng., of Polytechnique Montréal, is an internationally recognized engineer whose pioneering research in space networking and wireless communications has transformed global connectivity. As Canada Research Chair (Tier 1) and Director of the Poly-Grames Research Center, she leads groundbreaking research efforts on non-terrestrial networks and sub-terahertz communication systems, strengthening Canada's leadership in secure and sustainable communication systems. Her mentorship has allowed the training of a new generation of innovators, while her commitment to equity, diversity, and inclusion continues to inspire excellence and broaden female participation in the engineering profession across Canada and beyond.

Amir Khajepour, Professor, University of Waterloo

Amir Khajepour is an internationally renowned expert in mechatronic vehicle systems and a driving force behind Canada's transition to intelligent and sustainable transportation. His pioneering research in vehicle dynamics, control, and autonomy has produced 38 patented technologies, over 600 publications, and transformative industrial applicationsâ€”from the electric powertrain for Project Arrow to Canada's first all-weather autonomous shuttle. A prolific mentor and entrepreneur, he has founded or led seven Ontario-based startups driving innovation in automation, AI, and clean mobility. Dr. Khajepour is a Fellow of the ASME, EIC, and CSME, and recipient of the PEO Medal for Research and Development.

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Foutse Khomh, Professor and Vice-President, Research & Innovation, Polytechnique Montréal

Pr. Khomh is a well-recognized prolific leader in software engineering (SE). Tier 1 Canada Research Chairholder and McDonald Fellow, his research efforts have primarily been dedicated to improving the dependability and trustworthiness of software systems. A recent peer-reviewed report assessment of SE scholars published by Elsevier ranks him 4th in the world and 1st in Canada in the "Established researcher" Category. Pr. Khomh's work has been cited ~12,800 times (h-index of 58), which puts him among the most highly cited SE researchers of his generation. His work has had a significant impact on academia and industry, in Canada and abroad.

Darwin Kiel, Consultant, Independent

Dr. Darwin Kiel is an exemplary engineer and entrepreneur. He created Coanda R&D Corporation to meet real-world challenges and enable the success of Canadian organizations, while providing rewarding career paths for highly-educated engineers and scientists. His impact stretches across plastics processing, natural resources and energy, fuel cells, carbon capture, gasification, complex fluids mixing, pharmaceuticals, water treatment, sensor development, the environment, evacuation procedures and homelessness. Very few engineers have demonstrated the scope, range and depth of contributions as has Dr. Kiel. Dr. Kiel has been awarded more than 50 patents. Coanda received the 2009 ASTech Innovation in Oil Sands Research Award.

Erik Lindholm, Senior Distinguished Architect and Master Inventor, NVIDIA

Erik Lindholm held titles of Senior Distinguished Architect and Master Inventor at NVIDIA and is a trailblazer in graphics and computing. He co-architected the first GPU, the GeForce 256, the first programmable GPU, the GeForce 3, and was lead architect for the GeForce 8's revolutionary unified shading architecture. Holding 128 U.S. patents, his work has profoundly shaped GPU design enabling the AI revolution. A double UBC alumnus, he received the Faculty of Applied Science Dean's Medal of Distinction in 2016, and was awarded a Doctor of Science degree, honoris causa, in 2025.

Zheng Liu, Professor, University of British Columbia

Professor Zheng Liu is a globally recognized leader in multi-modal data fusion and artificial intelligence, ensuring the safety of critical infrastructure. His breakthrough methodologies enhance safety through advanced aircraft structural inspection systems, comprehensive water infrastructure assessment frameworks, and pioneering pipeline integrity solutions applied across the Canadian oil and gas industry. He has secured substantial research funding, ranks among the world's top researchers, and leads transformative industry partnerships while advancing Canadian engineering excellence globally through innovative sensing technologies and predictive maintenance solutions. His work bridges academic research with practical applications, establishing new standards for infrastructure asset management and safety.

Zhenguo Lu, Principal Research Officer, National Research Council Canada

Dr. Zhenguo Lu, Principal Research Officer at the National Research Council Canada, is a world leader in quantum dot lasers and semiconductor optical amplifiers whose pioneering research has transformed optical communications, 5G and beyond wireless networks, and quantum internetworking. His record-setting innovations, including the quantum dot comb laser, have advanced global digital infrastructure and seeded Canadian startups such as Ranovus Inc., attracting major investment and creating high-value jobs. As Head of NRC's Photonics Devices Group, Dr. Lu has united academia, industry, and government to drive breakthrough technologies, earning international recognition as a visionary engineer, prolific innovator, and transformative leader.

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Nader Mahinpey, Professor and Research Chair, University of Calgary

Dr. Nader Mahinpey's pioneering work in greenhouse gas reduction, global research leadership, and award-winning mentorship have made lasting contributions to climate science, industry, and academia. His patented carbon capture and conversion technologies are used worldwide, helping industries reduce emissions and move toward net-zero. Representing Canada in major international consortia, he strengthens the country's role in climate innovation. At home, he has launched four companies with his trainees, fostering thriving careers and building networks that connect research, commercialization, and professional development.

André McDonald, Professor, University of Alberta

André McDonald is an internationally recognized expert in thermal spray surface technologies and heat transfer. His pioneering research on the development of high-value protective coatings for the energy, defence, and aerospace sectors have been implemented by technology companies, used broadly to inform industry policy and strategy, and is the basis for other novel engineering research programs. He champions major technical and community initiatives that enhance people's lives and create equitable, diverse, and inclusive employment. He leads major national initiatives that have transformed research into deployable technology, created jobs, and engaged youth on training platforms to develop the future engineering workforce.

Alex Mihailidis, Associate VP - International Partnerships and Professor, University of Toronto

Dr. Alex Mihailidis, P.Eng., is a pioneering biomedical engineer whose research and leadership have defined AgeTech in Canada and globally. As Scientific Director of AGE-WELL and Professor at the University of Toronto, he integrates robotics, AI, and human-centred design to support healthy aging, translating innovations into commercial products and standards. He chaired the CSA committee that produced Canada's first long-term care standards, embedding engineering in infection prevention and facility design. He is a Fellow of the Canadian Academy of Health Sciences and the Rehabilitation Engineering and Assistive Technology Society of North America, and a UN "Healthy Ageing 50" honouree.

Roberto Morandotti, Professor, INRS

Prof. Roberto Morandotti is a renowned leader in photonics, with innovations that have revolutionized secure communications, sensing, and high-speed information technology. As a Tier 1 Canada Research Chair, he has enhanced Canada's innovation capacity through key industrial partnerships, patents, and the successful launch of photonics start-ups. His leadership has trained over 180 skilled engineers and scientists, who now advance research and industry across Canada and internationally. Recognized with awards such as the NSERC Steacie, Brockhouse, and Synergy Awards, the Marie-Victorin Prix du Québec, and the IEEE Quantum Electronics Award, he continues to strengthen Canada's profile in global engineering.

Goldie Nejat, Professor, University of Toronto

As the Canada Research Chair in Intelligent Assistive and Collaborative Robots, Goldie Nejat's groundbreaking research is pioneering the development of intelligent service/assistive robots that meet the increasing care needs of an aging population and help to combat dementia, search for people in harsh and time-critical environments, and help in both the home and workplace. Her outstanding contributions in robot perception, control and intelligence, and human-robot interactions are constantly pushing the capabilities of robots. She is a fellow of the American Society of Mechanical Engineers and the Canadian Institute for Advanced Research, and has received several prestigious research awards and honours.

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Banu Örmeci, Professor, Carleton University

Dr. Banu Ormeci received her MS and PhD degrees from Duke University (USA). She is a Full Professor and the Jarislowsky Chair in Water and Global Health in the Department of Civil and Environmental Engineering, and the Director of the Global Water Institute at Carleton University. She leads an internationally recognized research program on wastewater treatment and monitoring of emerging contaminants and pathogens. Her innovative research has resulted in several patents and new technologies. She is a dedicated educator, mentor, and volunteer, and has given freely of her time, professional experience, and engineering expertise to benefit the public.

Jim Oswell, Principal Geotechnical Engineer, Naviq Consulting Inc.

Dr. Oswell is a global leader in geotechnical engineering whose four-decade career has strengthened permafrost and pipeline engineering. Founder of Naviq Consulting Inc., he pioneered adaptive adfreeze pile systems, designed resilient infrastructure in Antarctica, and advanced pipeline integrity worldwide. As author of Soil Mechanics for Pipeline Stress Analysis and over 36 technical publications, he has positively influenced design practices, standards, and climate-resilient infrastructure. A Fellow of the Engineering Institute of Canada, awardee of the Roger J.E. Brown and Tony Stermac Awards, and active contributor to national and international standards and societies, Dr. Oswell exemplifies innovation, leadership, and global engineering impact.

Damiano Pasini, University Professor, McGill University

Dr. Pasini is an internationally recognized educator, scholar, innovator and strategic leader in mechanical metamaterials. His pioneering work on multistable metamaterials, including lattices, shell-based materials, origami, and kirigami, has led to direct applications across industries, including orthopedics, aerospace, soft robotics, and packaging. Besides high-impact research in leading journals and patented technologies, Dr. Pasini has actively engaged in industrial collaborations to address complex, real-world challenges with broad societal impact. Widely recognized through prestigious awards, Dr. Pasini has been instrumental in shaping his students' careers and in elevating mechanical metamaterials to a transformative frontier in materials science and engineering.

Heidi-Lynn Ploeg, Professor and Queen's Chair for Women in Engineering, Queen's University

Professor and Chair for Women in Engineering, Queen's University. Dr. Heidi-Lynn Ploeg, FASME, FORS, P.Eng., sees strong synergies between her passionate support for women in engineering and her engineering research - both efforts for which she has received awards. Her subject-centric research and design work has resulted in long-lasting implant fixation and bicycle products inclusive to women's biomechanics. Dr. Ploeg's innovative bone organ culture and loading system enable her mechanical testing and computer modeling of live human bone. Her collaborative research in biomechanics and implant design aims to advance the health and well-being of Canadians.

Denise Pothier, Chief Operations Officer, Canadian Council for Indigenous Business

A Chemical Engineer, with a foundation in the energy sector, Denise has over 30 years industry experience. After a rewarding and successful career with Stantec Consulting, Denise joined the Canadian Council for Indigenous Business as their Chief Operating Officer. Denise is an alumnus of the 2022 Governor General's Leadership Conference and was recently named a Fellow by Engineers Canada. She has been recognized by Engineers Nova Scotia, Women's Executive Network, Dalhousie University, and Athabasca University for her community work and promotion of engineering to historically excluded and marginalized groups.

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Gail Powley, President, Technology Alberta

Gail Powley is a trailblazer in advancing Alberta's engineering and technology sectors through visionary leadership, innovation, and advocacy. As CEO of Technology Alberta, she has built vital networks connecting entrepreneurs, government, and academia, and revitalized the ASTECH Awards to celebrate inclusive innovation. A champion for underrepresented professionals, she founded WinAPEGA, WISER, MentorUP, and BESTT, creating opportunities and support for women and other underrepresented groups in STEM. From pioneering advanced industrial automation to fostering mentorship and community-driven innovation, Gail's achievements have strengthened Alberta's global reputation for excellence, equity, and leadership in technology and engineering.

John Shen, Professor, Simon Fraser University

Dr. Shen, Professor and Director of School of Mechatronic Systems Engineering at Simon Fraser University, is a visionary leader in the field of power electronics, power semiconductor devices, and engineering education. He is well recognized for his pioneering work in MHz-frequency lateral power MOSFET and advanced DC circuit breakers. His innovations in power MOSFETs have been widely used in powering supercomputers and AI servers since 2008. His prolific contributions include roughly 400 publications, two authoritative books, and 22 issued U.S. patents. He is a Fellow of IEEE and a Fellow of the US National Academy of Inventors.

Wei Shi, Professor, Université Laval

Wei Shi, Canada Research Chair in Silicon Photonics and Optica Fellow, is an internationally recognized leader in integrated photonics. He pioneered micrometer-scale silicon photonic transmitters employing advanced modulation formats, achieving terabit-per-second capacity and record bandwidth density. Through his academic and entrepreneurial leadership, he has advanced Canada's photonics innovation ecosystem. His research spans optical communications, advanced sensing, and hybrid electronic-photonic integration. A dedicated mentor to hundreds of engineering students and an advocate for inclusive innovation, Shi continues to strengthen Canada's global leadership in photonics and semiconductor technologies.

Steven Thorpe, Professor, University of Toronto

Steven Thorpe is working to advance fundamental materials design and synthesis into next-generation water electrolysers for green energy production through hydrogen. He has partnered with Canadian and international suppliers, cell manufacturers, and end users through research collaborations and university-industry consortia such as Ni-ElectroCan and Auto21. His exceptional teaching has been recognized with several awards, including the University of Toronto's highest teaching award, and he was co-chair of the University's Teaching Academy. He has held several leadership roles in ASM, the world's largest materials engineering society. His many awards include the Academics in Industry Award and the CIM Distinguished Lecturer Award.

Steven X. Xu, Principal Scientist, Kinectrics

Dr Steven Xu is globally renowned for his contributions to understanding and managing ageing mechanisms in critical structural components of nuclear reactors. His work focuses on applying advanced fracture mechanics to enhance the evaluation of structural integrity and support the extended operation of nuclear reactors. His significant contributions to the nuclear industry also include advancing fitness-for-service standards and disseminating knowledge across academic, industry, and professional platforms. He has chaired CSA and other committees, contributing to industry standards and design codes. He is an ASME Fellow, Associate Editor of ASME Journal of Pressure Vessel Technology, and Adjunct Professor at Queen's University.

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Yimin Zeng, Research Scientist, Natural Resources Canada

Dr. Yimin Zeng, a Senior Research Scientist at Natural Resources Canada and an Adjunct Professor at four Canadian universities, is an internationally recognized expert in materials corrosion and clean technology development. He has pioneered groundbreaking research in bioenergy, carbon capture, utilization and storage (CCUS), next-generation nuclear and thermal power systems, hydrogen energy, petroleum decarbonization, and advanced battery technologies. His innovations and discoveries have influenced high-level government decision-making, contributed to the advancement and establishment of international standards, and driven the commercial success of sustainable clean technologies across both national and global industries.

Baiyu Zhang, Professor and Canada Research Chair, Memorial University

Dr. Zhang, Professor and Canada Research Chair in coastal environmental engineering, has made significant advances in combating marine oil spills and emerging contamination. Her research resulted in novel bio-products and technologies widely applied for offshore spill response, coastal wastewater treatment, and fishery waste management. She has served Canadian Association on Water Quality as president, Canada's Ocean Protection Plan's Multi-Partner Research Initiative as a lead researcher and United Nations Development Program as senior advisor. She is a Fellow of Canadian Society for Civil Engineering and Engineering Institute of Canada, and Member of Royal Society of Canada's College of New Scholars.

Boxin Zhao, Professor, University of Waterloo

Boxin Zhao is a Professor in Chemical Engineering at the University of Waterloo and internationally recognized leader in polymer nanotechnology, smart materials, and bioadhesion. His pioneering research has advanced the design of functional polymer systems and delivered impactful engineering solutions in Canada and globally. He has translated fundamental discoveries into industrial innovations, including PFAS-free coating technologies that enhance human and environmental safety. He established multidisciplinary research programs, many of his over 100 trainees are now professors, industrial leaders, and entrepreneurs worldwide. His exceptional contributions have earned him the Ontario Professional Engineers Medal, an Endowed Chair in Nanotechnology.

NEW INTERNATIONAL FELLOWS 2026

Yongcan Chen, Professor, Tsinghua University

Professor Yongcan Chen is an internationally renowned expert who has made groundbreaking contributions to the advancement of hydraulic and hydropower engineering worldwide, including Canada. His pioneering research has fundamentally advanced hydro-environmental theory and improved the ability to predict and mitigate the environmental impacts of hydropower projects. He has successfully led over 100 large-scale major science and technology projects in water environment and security, promoting interdisciplinary integration between hydraulic science and intelligent engineering. He has published 256 high-impact academic papers, authored 6 monographs, held 31 internationally recognized patents, and won more than 20 academic and technological awards.

Ashwani Gupta, Distinguished University Professor, University of Maryland: College Park

Professor Gupta is a leading international authority on swirl flows and distributed combustion for cleaner energy conversion along with significant energy savings, near zero emission and reducedCO2 footprint from industrial furnaces and power applications using fossil and bio fuels. He has made lasting contributions to distributed combustion development that are now used worldwide in advanced industrial furnaces with singular successes for significant energy savings, pollution reduction, noise and carbon dioxide, and improved quality of products produced and equipment longevity. He has co-authored 330+ papers, 3 books, 18 edited books and 22 book chapters, garnered 22,000 Google Scholar citations.

Wen Jung Li, Vice President (Talent and International Strategy), City University of Hong Kong

Prof. Wen Jung Li is internationally recognized for pioneering contributions to micro- and nanotechnology, AI-enabled sensing, and sensor-based motion analytics. His innovations in nanomaterial-based sensors and AI-driven wearable systems have advanced healthcare, sports technology, sustainability, and biomedical diagnostics. As Vice President of City University of Hong Kong and Past President of the IEEE Nanotechnology Council, he has provided visionary leadership in promoting international collaboration and innovation. Through sustained creativity, mentorship, and academic leadership, Prof. Li has made distinguished contributions to engineering research, industry, and education, exemplifying excellence in applying technology for the benefit of society.

Azad M. Madni, University Professor and Executive Director, University of Southern California

Dr. Azad Madni is a preeminent figure in engineering, globally recognized for his transformative contributions to systems engineering, intelligent systems, and engineering education. His distinguished career synthesizes academic rigor, entrepreneurial success, and an abiding commitment to societal wellbeing. This unique blend is evidenced by his highest honors in the field, including Member of NAE, the NAE Gordon Prize and IEEE Simon Ramo Medal, for pioneering transdisciplinary systems engineering and advancing augmented intelligence technology. Beyond his technical achievements, he is acclaimed for his philanthropy and mentorship, having cultivated generations of engineers who now lead in academia, industry, and government.

Kaushik Rajashekara, Hugh Roy and Lillie Cranz Cullen Distinguished University Professor, University of Houston

Prof. Rajashekara is internationally recognized for his pioneering contributions to transportation electrification for improving energy efficiency and reducing emissions. He has made transformative contributions to propulsion, power generation, architectures, and control systems for electric, hybrid, and fuel-cell vehicles, as well as hybrid aircraft and flying cars. His exceptional achievements have earned him prestigious honors, including the Global Energy Prize - the top international Energy prize; the IEEE Medal for Environmental and Safety Technologies; election to the US, Chinese, Japanese, and Indian National Academies of Engineering; and induction into the Delphi Innovation Hall of Fame.

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Ganapati Dadasaheb Yadav, Emeritus Professor of Eminence and Bhatnagar Fellow, Institute of Chemical Technology

Ganapati D. Yadav, Padma Shri laureate, Bhatnagar Fellow, and National Science Chair of India, is a globally acclaimed chemical engineer, innovator, policymaker, and academic leader with 134 patents, over 550 papers, and transformative technologies advancing the global transition to net zero. His pioneering work in catalysis, green hydrogen, CO2 conversion, biomass valorisation and circular economy, which has attracted expressions of interest from numerous national and international companies, has deepened Indo-Canadian collaborations through bilateral programmes with leading Canadian universities. A Fellow of the US NAE, US NAI, TWAS, IChemE, INSA, INAE, and RSC, he is Adjunct Professor U of Saskatchewan.