The Canadian Society for Mechanical Engineering
A constituent society of the Engineering Institute of Canada

La Société Canadienne de génie mécanique
Une société constituante de l'Institut canadien des ingénieurs

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The Canadian Society for Mechanical Engineering (CSME), founded in 1970, is pleased to announce the winning recipients of its 2023 regular awards. These awards may be bestowed biannually to members of the society for their outstanding contributions to specific areas of mechanical engineering in Canada.

In addition to the three previously-announced technical award winners, six exceptional engineers will be presented with their awards on 30 May at the 2023 CSME International Congress to be held from 28-31 May at the Faculty of Engineering, University of Sherbrooke, QC.

Please consider attending the 2023 CSME International Congress to congratulate all of these exceptional award winners and network with your colleagues: https://www.csmecongress.org/.

Robert W. Angus Medal

For "outstanding contributions to mechanical engineering practice in Canada, including industrial innovation, technology commercialization and creativity."

Muthukumaran (Muthu) Packirisamy, Ph.D., FCSME
Professor, Concordia University, QC

Muthu Packirisamy, a Professor, Concordia Research Chair, University Research Fellow and Gina Cody Innovation Fellow at Concordia University, is the recipient of many awards, including Member Royal Society of Canada College, Fellows of National Academy of Inventors (US), Indian National Academy of Engineering, Engineering Institute of Canada, Canadian Academy of Engineering, American Society of Mechanical Engineers, Institution of Engineers India, Canadian Society for Mechanical Engineering, CSME's I.W. Smith award, Concordia University Research Fellow, Petro Canada Young Innovator Award, Gina Cody Research Excellence Award and ENCS Young Research Achievement Award. He has authored 510 research articles, 1 book, 6 book chapters, 49 invited talks, 32 inventions, obtained grants around $16 Million and supervised more than 16 RA/PDF, 33 PhDs, 54 Masters and 71 UG student. His recent inventions on energy harvesting from photosynthesis of blue green algae and Direct Sound Printing had more than 400 citations worldwide.

I.W. Smith Award

For "outstanding achievement in creative mechanical engineering within 10 years of PhD degree"

Hamid Akbarzadeh, Ph.D., MCSME
Associate Professor, McGill University, QC

Dr. Abdolhamid (Hamid) Akbarzadeh is a Canada Research Chair in Multifunctional Metamaterials, an Associate Professor (Bio-inspired material design) in the Bioresource Engineering Department, an Associate Member (Solid mechanics) in Mechanical Engineering Department, and the Director of Advanced Multifunctional and Multiphysics Metamaterials Lab (AM3L) at McGill University in Montreal, Canada. He joined McGill as a Faculty member in 2015 after two and half years of working on advanced architected cellular solids as an NSERC Postdoctoral Fellow in the Mechanical Engineering Departments at McGill University and University of New Brunswick. His research and training program at AM3L is aligned with systematic design, multiscale multiphysical modeling, and 3D printing of programmable and smart multifunctional metamaterials and metastructures. To date, his contributions have led to 6 patent applications/reports of invention and 115 published articles in high-impact journals like Advanced Materials, Advanced Functional Materials, Advanced Science, Nature Communications, Acta Materialia, Carbon, and Applied Materials Today.

2023 CSME Fellows

For "excellence in mechanical engineering and significant contributions to the progress of the profession"

Dana Grecov, Ph.D., 2023 FCSME
Professor, University of British Columbia, BC

Dr. Dana Grecov is a Professor in the Mechanical Engineering Department at the University of British Columbia, specializing in Fluid Mechanics. Dr. Grecov is internationally known for her research contributions in fluid mechanics and rheology. She applies the concepts to conduct fundamental and applied research that has a high degree of novelty, on a range of subjects from liquid crystals and lubricants, to synovial fluids and CFD studies relevant to biomedical applications. Notable achievements include recent important translational applications to biodegradable lubricants for prosthetic joints and biological and industrial lubricants in general, with contributions to cellulose nanocrystalline materials, computational methods for complex fluids, important real-world application to modelling and simulations of industrial coking processes that are implemented by Syncrude Canada, and new fluid-structure interaction simulations of artificial aortic heart valves.

2023 CSME Fellows (cont'd)

Ya-Jun Pan, Ph.D., 2023 FCSME
Professor, Dalhousie University, NS

Dr. Ya-Jun Pan is an internationally renowned researcher, distinguished educator, and volunteer leader. She is a Professor at Dalhousie University and has made significant contributions in robust nonlinear control and cyber physical systems with in-depth applications to tele-robotics, cooperative and unmanned systems, intelligent robotics, rehabilitations, and industrial automation. Dr. Pan has contributed extensively to engineering and professional societies. She has been recognized with fellowships in Engineering Institute of Canada (EIC) and American Society of Mechanical Engineers (ASME), Research Excellence Award, and Alexander von Humboldt Research Fellowship. She has provided dedicated leadership and served as Senior Editor and Associate Editor for journals and conferences, IES AdCom Member-at-Large, technical and conference organizing committees, WiE Chair and CSME keynotes, VP Atlantic of CSME, and NSERC Evaluation Group member. Dr. Pan has trained over 80 HQP who have joined industry or academia making significant contributions to the engineering society in Canada and worldwide.

Hossein Rouhani, Ph.D., 2023 FCSME
Associate Professor, University of Alberta, AB

Dr. Hossein Rouhani is an Associate Professor in the Department of Mechanical Engineering at the University of Alberta and a Research Affiliate at the Glenrose Rehabilitation Hospital (Edmonton). He is also the founder and director of the Neuromuscular Control & Biomechanical Laboratory. He received a PhD degree in Biotechnology and Bioengineering from the Swiss Federal Institute of Technology in Lausanne (EPFL). Dr. Rouhani was then a Postdoctoral Fellow at the Institute of Biomedical Engineering at the University of Toronto. Dr. Rouhani's fields of research are in-field health monitoring using innovative wearable technologies and rehabilitative and assistive technology development. Within his translational research program, Dr. Rouhani has had several collaborative research projects with university hospitals to implement his developed wearable technologies in clinical research at these hospitals. Dr. Rouhani was the Congress Chair of 2022 CSME International Congress and is Chair of the CSME Technical Committee for Biomechanics and Biomedical Engineering.

2023 CSME Fellows (cont'd)

Xiaohua Wu, Ph.D., 2023 FCSME
Professor, Royal Military College of Canada, ON

Dr. Xiaohua Wu is a Professor in the Mechanical and Aerospace Engineering Department at Royal Military College of Canada. Dr. Wu was elected as a Fellow of the American Physical Society (APS) in 2015, and as an Associate Fellow of the AIAA in 2011. Aside from the CSME Fluid Mechanics Medal in 2021, he also received the Commandant's Medal in 2011, the John Scott Cowan Prize for Research Excellence in 2014, and the Principal's Medal in 2022 from the Royal Military College of Canada. He is being inducted as a CSME Fellow for his dedicated services to the CSME community and the broad Canadian Engineering community; for pioneering direct numerical simulations of jet engine turbomachinery flow, spatially developing transitional and turbulent boundary layer and spatially-developing pipe flow; for investigations on the origination of turbulent spots; for the discovery of turbulent-turbulent spots from fully-turbulent boundary layers; and for a high-impact inflow turbulence generation method that is being used by researchers and engineers world-wide.