The Royal Society of Canada 2023 Award Winners

Alice Wilson Awards

To three women of outstanding academic qualifications in the Arts and Humanities, Social Sciences or Science who are entering a career in scholarship or research at the postdoctoral level.

CAGULADA, Elaine | Department of Gender Studies, Queen's University

Elaine Caguladа researches in the areas of disability studies, black studies, and sociology. A post-doctoral fellow at Queen's University, Elaine explores stories of disabled people in memorialized Canadian cancerist institutions. She completed her PhD in the Department of Social Justice Education at University of Toronto's Ontario Institute for Studies in Education, and co-edited, alongside Dr. Tanya Titchkosky, Madeleine DeWelles, and Dr. Efrat Gold, *DisAppearing: Encounters in Disability Studies*.

RONDEAU, Sabrina | Department of Biology, University of Ottawa

Sabrina Rondeau is an NSERC Postdoctoral Fellow in the Department of Biology at the University of Ottawa, working with Dr. Jessica Forrest. Her current research focuses on the impact of agricultural practices (tillage and pesticide use) on wild ground-nesting bee communities in field crops. She also studies nest-site preferences of ground-nesting bees in agricultural areas and the dual impact of climate change and pesticides on hibernating bumblebee queens.

TUTELMAN, Perri | Department of Oncology, University of Calgary

Perri Tutelman obtained her PhD in Clinical Psychology from Dalhousie University in 2022. Since then, she has been a Postdoctoral Fellow in Psychosocial Oncology at the University of Calgary and Cancer Care Alberta. Her research is centered at the intersection of psychosocial oncology, pain, and mental health and is focused on developing novel patient-oriented interventions to support children, adolescents, and young adults diagnosed with cancer.

Henry Marshall Tory Medal

For outstanding research in any branch of astronomy, chemistry, mathematics, physics, or an allied science.

KUMACHEVA, Eugenia | Department of Chemistry, University of Toronto

Eugenia Kumacheva is recognized for her seminal contributions in fundamental and applied research in materials science. Her groundbreaking discoveries include liquid-to-solid transitions in ultrathin liquid films, a striking lubrication effect by brush-like polymer molecules, and the similarity between chemical reactions and self-organization of nanostructured materials. She designed a broad range of advanced materials with applications including drug delivery for cancer treatment, tissue engineering, and high-density optical data storage and biometrics.

Jason A. Hannah Medal

For an important publication in the history of medicine.

DUFFIN, Jacalyn | Department of History, Queen's University

Hematologist and historian, Professor Emerita Jacalyn Duffin, MC, MD (Toronto), PhD (Sorbonne) FRCPC, FCAH, FRSC, held the Hannah Chair at Queen's University, teaching students of medicine, nursing, history, and philosophy from 1977 to 2017. One of her eleven books, Stanley's Dream (2019) examines and revives the long forgotten Canadian Medical Exposition to Soviet Island (1964-65) through archives, scientific papers, and interviews with surviving expeditionists scattered around the globe.

John L. Synge Award

For outstanding research in any of the branches of the mathematical sciences.

LAYTON, Anita | Departments of Applied Mathematics and Biology, Faculty of Computer Science and School of Pharmacy, University of Waterloo

Anita Layton, Professor of Applied Mathematics at the University of Waterloo, is an internationally acclaimed authority and leading researcher in mathematical medicine and biology. She has solved long-standing problems in scientific computing and renal physiology. She is recognized for her pioneering contributions to computational methods for fluid-structure interaction problems, and to mathematical modeling of mammalian physiology and pathophysiology, including the first sex-specific models of kidney physiology and blood pressure regulation.

Kitty Newman Memorial Award

For outstanding contributions from an emerging scholar in the field of philosophy.

OGBOGU, Ubaka | Faculty of Law, University of Alberta

Ubaka Ogbogu is a professor, multidisciplinary legal scholar, and a leading expert on the ethical and regulatory aspects of health research and technologies. His scholarship has shaped and influenced academic discourse and governance policies on challenging moral, legal and social questions surrounding research, development and clinical adoption of next-generation health technologies. His research supports the delivery of ethical and innovative health technologies to Canadians.

McLaughlin Medal

For important research of sustained excellence in medical science.

NAROD, Steven | Dalla Lana School of Public Health, University of Toronto

Steven Narod has proven that hereditary breast/ovarian cancers are preventable, and he has also found that many Ontario women with BRCA1/2 mutations are ineligible for provincially funded genetic testing. For women unwilling to undergo radical surgeries, he is pinpointing dietary options that reduce risk. His database of 12,000+ women from 30 countries supports numerous international collaborations. Author of over 550 peer-reviewed publications, Dr. Narod has an H-index of 84.

Michael P. Païdoussis Medal

For outstanding contributions to research, education and leadership in applied mechanics.

REDDY, J.N. | Department of Mechanical Engineering, Texas A&M University

J.N. Reddy's shear-deformation plate and shell theories have resulted in both scientific advancement and technological utility, and helped thousands of researchers to extend and apply his ideas to practical engineering problems. He conceived transformative novel formulations to study architected-material structures and damage and fracture in solids. Also, the author of well-received textbooks that have impacted the education of three generations of engineers, he is a worthy recipient of this medal.

Miroslaw Romanowski Medal

For scientific work relating to environmental problems.

SAYARI, Abdelhamid | Department of Chemistry and Biomolecular Sciences, University of Ottawa

Abdelhamid Sayari is one of Canada's most cited chemists for his pioneering work on porous materials and their environmental applications. He is internationally recognized for the discovery and development of recyclable materials for carbon capture with unparalleled efficiency. Thanks to the high selectivity and low regeneration energy of Sayari's proprietary materials, his invention is poised to become the leading technology for CO2 capture with direct implications on greenhouse gas effect and global warming.

Pierre Chauveau Medal

For a distinguished contribution to knowledge in the humanities.

RAJAN, Tilottama | Department of English and Centre for Theory and Criticism, Western University

Tilottama Rajan is Distinguished University Professor and former CRC in English and Theory at Western University. She is a leading international scholar in Romantic literature, Contemporary Theory, and German Idealism with a special interest in the reciprocal relations between philosophy, the life sciences, and aesthetics. Also focusing on the place of these areas in organizations of knowledge from the Enlightenment to the present, her work brings a new critical edge to the study of literature, the interdisciplinary humanities and the history of interdisciplinarity.

Rutherford Memorial Medal in Chemistry

For outstanding research in chemistry.

CRANSTON, Emily | Departments of Wood Science and Chemical and Biological Engineering, The University of British Columbia

Emily D. Cranston is a Professor and President's Excellence Chair in Forest Bioproducts at the University of British Columbia. She is a world-leading nanoscientist. Her research is expanding the use of nanocellulose, derived from sustainable bio-based resources like wood pulp, in technologies that offer environmentally-friendly alternatives to petrochemical-based materials and plastics. Cranston is highly cited, highly funded, and has won prestigious awards typically reserved for late career scientists.

Rutherford Memorial Medal in Physics

For outstanding research in physics.

KARIMI, Ebrahim | Department of Physics, University of Ottawa

Professor Ebrahim Karimi, a physicist at the University of Ottawa, is a pioneering figure in the fields of photonics and electron beam optics. His innovative work involves creating novel devices capable of generating structured photonic and electron waves. He has applied these devices to enhance secure communication protocols, simulate complex quantum systems, engineer the quantum wavefunction of electrons to characterise materials, and address fundamental questions in physics.

Sir John William Dawson Medal

For important contributions of knowledge in multiple domains.

SMOL, John | Department of Biology and School of Environmental Studies, Queen's University

Professor John Smol's interdisciplinary research programs, blending geological and biological approaches, have changed the way we assess environmental change. His careful analysis of information laid down in lake and river sediments provides appropriate temporal contexts for distinguishing natural versus anthropogenic changes to our global environment. Smol pioneered many of the approaches used to study long-term changes in ecosystems globally, addressing key issues such as pollution, climate change, and biodiversity loss.

Yvan Allaire Medal

For outstanding contributions in governance of public and private organizations.

MAGNAN, Michel | Department of Accountancy, John Molson School of Business, Concordia University

Michel Magnan is Distinguished University Research Professor and the Stephen A. Jarislowsky Chair in Corporate Governance at the John Molson School of Business of Concordia University. He holds a Ph.D. in Business Administration from the University of Washington. He is a Distinguished Member of the Order d'excellence en éducation du Québec and Fellow of the Royal Society of Canada. His research focuses on corporate governance, financial disclosure and corporate social responsibility.