



Canadian Society for Chemical Engineering | *For Our Future*
Société canadienne de génie chimique | *Pour notre avenir*

CSChE Best PhD Dissertation Award

This award recognizes an outstanding Canadian doctoral dissertation that contributes to the advancement of the field of chemical engineering.

Deadline

March 1 every year

Sponsor

CSChE

Award

- Framed certificates for the first and second prizes

Nomination Requirements

- The nominee's thesis work must have been completed in a graduate chemical engineering program of a Canadian university.
- The nominated thesis must have been successfully defended by the nominee as well as accepted by the graduate program in the calendar year prior to when the award is given.
- The nominee must
 - be a CSChE member at the time of nomination.
 - have been a CSChE member in the last two years of their doctoral program.
 - have made at least one oral presentation at a Canadian Chemical Engineering Conference

A nomination package must be submitted electronically through [Awards Force](#). The package should include the following:

- **Nomination letter** (maximum 3 pages) by the nominator including a concise description of the nominee's theoretical as well as practical contributions made in the dissertation. This is particularly important for a manuscript-based dissertation where multiple authors may have contributed to the work.
- **Curriculum Vitae** (maximum 2 pages) in which the nominee's research contributions are listed.
- **Synopsis of the dissertation** (maximum 2 pages).
- **Official document confirming dissertation completion date** (issued by the department, graduate school, or faculty where the nominee completed their doctoral program).
- **Copies of CSChE Membership invoices** confirming the nominee's CSChE membership at the time of nomination as well as in the last two years of their doctoral program.
- **Details of nominee's oral presentation** in the past at a Canadian Chemical Engineering Conference.
Please do not attach nominee's thesis. A nomination with an attached thesis will be disqualified.

Notes

Each prize winner will be required to register and give a keynote presentation at the Canadian Chemical Engineering Conference in which the award will be given.

A doctoral supervisor is limited to a single nomination per year.

Self-nominations will not be accepted.

Nominations for this award are valid for one year only.

Selection Committee

- CSChE Director of Awards as non-voting Chair
- CSChE Director of Student Affairs
- CSChE Director of Publications
- One other representative from the CSChE Board of Directors

Notes

In selecting the award winner, the committee will consider

- Scientific and technical quality of the research,
- Contributions to the advancement of chemical engineering,
- Originality of the research, and
- Clarity of presentation.

The award shall be presented annually unless

- the committee considers that no suitable candidate is nominated, or
- less than two nominations are received

List of Recipients

2024 Winners

First place

Reza Eslami, MCIC

Toronto Metropolitan University

[LinkedIn](#)



Dr. Reza Eslami earned a Ph.D. in Chemical Engineering from Toronto Metropolitan University. He is a dedicated problem-solver who leverages research, creativity, and collaboration to tackle challenges. With a strong foundation in material, polymer, and nanomaterial science, he integrates his expertise with a profound understanding of electrochemistry to deliver meaningful outcomes. Driven by a desire to innovate while promoting sustainability, he focuses on the intersection of these fields to drive positive change. Inspired by his innovative spirit, Dr. Eslami founded a start-up company specializing in electrochemistry and wearable technology, with a focus on contributing to societal advancement. His remarkable contributions have garnered recognition, including prestigious awards such as the Ontario Minister's Award of Excellence - Rising Star in 2024 presented by Jill Dunlop, the Governor General's Gold Medal in 2023 bestowed by the Governor General, the Outstanding Innovation Award in 2023 presented by Mitacs, holder of three consecutive years of the Ontario Graduate Scholarship (OGS, 2020-2023), and he was ranked as the top OGS holder as an international graduate student at TMU in 2023.

Second place

Olga Torres Rocha, MCIC

Queen's University

[Website](#)



Dr. Olga Torres-Rocha earned her Ph.D. in Chemical Engineering from Queen's University in the fall of 2023 under the supervision of Prof. Pascale Champagne and Prof. Michael Cunningham. Her research focused on the development of new polymer-cellulose nanocrystal-based materials using controlled radical polymerization with targeted properties for tailored applications. During her studies, Olga received the Dean's Graduate Research Assistant Award. Olga's expertise is in polymer science, mainly different polymerization techniques and processes to obtain new functional/advanced materials and is interested in developing new polymeric bio-based materials via green routes for different applications. Dr. Torres-Rocha is currently a post-doctoral fellow at Queen's University in the departments of Chemistry/Chemical Engineering since December 2023, under the supervision of Prof. Philip Jessop and Prof. Michael Cunningham gaining experience on Green Chemistry.

2023 Winners

No winners

2022 Winners

First place

Olubukola Alimi, MCIC

McGill University

[Twitter](#) [LinkedIn](#)



Dr. Olubukola S. Alimi is a passionate early career researcher who is currently a Natural Sciences and Engineering Research Council of Canada (NSERC) postdoctoral fellow at the Centre for the Characterisation of Environmental Nanomaterials at Université de Montréal, under the supervision of Professor Kevin Wilkinson. She received her Ph.D. degree in Chemical Engineering from McGill University at the Biocolloids and Surfaces Laboratory, under the supervision of Professor Nathalie Tufenkji. Prior to her doctoral studies, she obtained her Master's (Chemical Process Engineering) and Bachelor's (Chemical Engineering) degrees from University College London, United Kingdom and Covenant University, Nigeria, respectively.

Her doctoral research encompassed multidisciplinary areas at the intersection of environmental nanotechnology, contaminant hydrogeology, colloid transport processes, water and wastewater treatment and polymer science. Her research work has been featured in several policy documents and news outlets. She received more than 12 scholarships and awards during her graduate training which includes the Presidential Special Scholarship for Innovation and Development (PRESSID), Nigeria, Fonds de recherche du Québec – Nature et technologies (FRQNT) Doctoral Fellowship (B2X) and NSERC PURE CREATE Scholarship amongst others. Her doctoral research resulted in over 6 publications.

Second place

No award given in 2022.

2021 Winners

First place

Charles Bruel, MCIC

Centre d'études des procédés chimiques du Québec (CÉPROCQ)

@bruel_charles www.linkedin.com/in/cbruel



Dr. Charles Bruel is a post-doctoral fellow at the Centre d'études des procédés chimiques du Québec (CÉPROCQ) since december 2020. He has an expertise in (bio)materials, nanoparticles, composites, and surface characterization methods. He currently works on the optimization and scale-up of a biorefinery process. Dr. Bruel holds a Ph.D. and a M.A.Sc. in chemical engineering from Polytechnique Montreal (QC, Canada), and an engineering degree from the École polytechnique (Palaiseau, France). He is a FRQNT and Mitacs scholar. He has published 10 articles in peer-reviewed journals since 2016, 8 of which during his Ph.D. (2017-2020). He was awarded 7 scientific communication prizes and was a 2019 Canadian finalist of the french-speaking 3-minute thesis competition MT180 organized by ACFAS. His thesis was recognized as the best Ph.D. dissertation from 2020 by the chemical engineering department of Polytechnique Montreal.

Second place

Fahad Al-Amin Chowdhury, MCIC

University of Ottawa

<https://uniweb.uottawa.ca/members/138?embed=2>



Dr. Fahad Chowdhury is a Research Engineer-in-Training with NOVA Chemicals based at the Centre for Applied Research in Calgary, Alberta. He obtained a double bachelor's degree in chemical engineering and computer technology, followed by a doctoral degree in chemical engineering at the University of Ottawa. He completed his PhD thesis under the co-supervision of Professors Poupak Mehrani and Andrew Sowinski on the topic of triboelectric charging to observe charge transfer behaviours of insulator particles and to develop a CFD model for charge generation in gas-solid fluidized beds. Fahad's research was first supported by Univation Technologies through the Queen Elizabeth II Graduate Scholarship in Science and Technology, followed by the Ontario Graduate Scholarship, and finally the Postgraduate Scholarship from the Natural Sciences and Engineering Research Council of Canada (NSERC). The research was conducted in collaboration with

Professor Alberto Passalacqua and his CFD research group at Iowa State University, USA, where Fahad attended as a visiting scholar in two occasions thanks to the International Experience Scholarship from the University of Ottawa and the Globalink Research Award from Mitacs. At the University of Ottawa, Fahad also served as the President of the Chemical and Biological Engineering Graduate Student Association (CBEGSA).

2020 Winners

First place

Nadia Shardt, MCIC
University of Alberta



Dr. Nadia Shardt studied chemical engineering for her undergraduate and doctoral degrees at the University of Alberta. She completed her PhD thesis under the supervision of Prof. Janet Elliott on the topic of fundamental thermodynamics to describe diverse processes in engineering and other applications. In addition, Nadia is interested in applying engineering principles to the design of cryopreservation protocols for clinical use. During her graduate studies, she received an Alexander Graham Bell Canada Graduate scholarship from the Natural Sciences and Engineering Research Council of Canada (NSERC), an Alberta Innovates Graduate Student Scholarship, and a TW Fraser and Shirley Russell Teaching Fellowship.

Currently, she is investigating ice nucleation to improve our understanding of the atmosphere in the group of Prof. Ulrike Lohmann at ETH Zurich, funded in part by an NSERC postdoctoral fellowship.

Second place

Nariman Yousefi, MCIC
McGill University