Canadian Society for Chemical Engineering | *For Our Future*

CSChE Awards

Terms of Reference and Lists of Award Recipients

CSChE Awards

The Canadian Society for Chemical Engineering Awards program recognizes outstanding contributions to further chemical engineering or influence others to learn about it. Most CSChE award winners receive their awards and present award lectures at the Canadian Chemical Engineering Conference

This CSChE Awards Handbook provides the Terms of Reference for each award along with a list of current and past winners. The awards are

Award for Best Graduate Student Paper in *The Canadian Journal of Chemical Engineering*

Bantrel Award in Design and Industrial Practice

The Canadian Journal of Chemical Engineering Lectureship Award

D. G. Fisher Award

Hatch Innovation Award (formerly Syncrude Canada Innovation Award)

Process Safety Management Award

R. S. Jane Memorial Award

Award for Best Graduate Student Paper in *The Canadian Journal of Chemical Engineering*

This award will be given for outstanding published work in The Canadian Journal of Chemical Engineering by a graduate student while studying at a Canadian university during a 12-month publication period. This award is presented to the graduate student author(s) of a single paper. The graduate student must be the primary author. Faculty advisors may be co-authors.

Terms of Reference

Sponsor: *The Canadian Journal of Chemical Engineering*

Award:

- A Certificate
- One CSChE Conference registration. The winner is expected to present a paper at the Canadian Chemical Engineering Conference. If there is more than one graduate student authoring the paper, only one registration will be paid.
- A short bio of the award winner will be published in *The Can. J. Chem. Eng.* to showcase the winner's work (For multiple graduate student authors, biographies of each graduate student will be published)

Membership in the CSChE is not a requirement.

No application for the award is required.

Selection Committee: The Publications Committee is responsible for choosing a winner from a list of candidates prepared by the Can.J.Chem.Eng. editor and associate editors. The committee will consider originality and quality of research or design, theoretical soundness and impact in making its choices.

The committee reserves the right not to award a prize in any given year if they deem that the papers are not of high enough quality.

List of Recipients

Date	Award Winner	Award Lecture
2016	Aida Sharif Rohani	Multi-objetive Optimization of Biobutonal Production
2015	Ali Saarvi	Facile One Step-Synthesis and Characterization of High Aspect Ratio Core-Shell Copper-Polyaniline Nanowires
2014	Ali Shekari	Transient Kinetics of In-butane Partial Oxidation of Elevated Pressure
2013	Mohammed Alaqqad	The Permeability of Wood-Chip Beds: The Effect of Compressibility", Can J Chem Eng 2012, 90, 1278-1288 by M Alaqqad, CPJ Bennington, DM Martinez.

Bantrel Award in Design and Industrial Practice

This award is presented to a Canadian citizen or a resident of Canada for innovative design or production activities accomplished in Canada.

Terms of Reference

Deadline: December 1 every year

Sponsor: Bantrel

Award: A plaque and $1,500 cash

Eligibility: The activities may have resulted in a significant achievement in product or process design, small or large company innovation, or multidisciplinary design-directed research or production. The achievement will relate to the practice of chemical engineering and/or industrial chemistry whether in research and development, process implementation, entrepreneurialism, innovation, production or some combination of these. It may be via a well-known, long-standing reputation for translating chemical engineering principles into design and industrial practice which contributes to the profession as a whole.

The award is open to all chemical engineers and industrial chemists or those practicing these disciplines; it is not restricted to those whose normal employment is in the industrial sphere.

Nominations must include:

- **Citation (250 word maximum)** statement of why the candidate should receive the award. This is the key document in the nomination and this information should be relevant to the achievements for which the award is being offered.
- **Biographical Sketch (maximum one page)** This provides background information on the nominee and summarizes past accomplishments. This is a summary of information obtained from a C.V.
- Curriculum Vitae (maximum nine pages).
- **Supporting Letters (3 to 5)** At least two letters must be from outside the nominee's organization.

Membership in the Institute is not a prerequisite for this award.

All nominations will remain in force for three years. Nominators are responsible for keeping the record of the nominee up to date and complete.

Selection Committee

- CSChE Director of Awards as non-voting Chair
- CSChE Past President
- CSChE Vice-President
- Two past winners of this award

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

The award shall be presented at the Canadian Chemical Engineering Conference. The recipient will be required to present an award lecture.

List of Recipients

Date	Award Winner	Award Lecture
2016	No award given	
2015	Biao Huang	Robust Model Identification for Practice: Probabilistic Approaches
2014	Ajay Dalai	Hydrotreating of Bitumen Derived Heavy Gas Oil Using Novel Adsorbent and Catalysis
2013	Kelly Hawboldt	
2012	Franco Berruti	Pyrolytic Conversion of Biomass Residues into Valuable Bio-Iol and Bio-Carbon Products
2011	Choon Jim Lim	Design Implementation in Modern Chemical Engineering Teaching and Research
2010	Donald F. Weaver	The Rise of Micropharma
2009	Zhenghe Xu	Development of Chemical and Materials Engineering

2008	Yonghao Ni	Properties of High Yield Pulps (HYP) and Their Applications to Various Paper Grades
2007	Jesse Zhu	Manipulating Fine Particles for the Best Industrial Practice

CSChE Award in Industrial Practice

Sponsored by Bayer Inc.

2006	John F. MacGregor	Learning from Industrial Data: the Key to Productivity and Quality Improvement
2005	Larry Seeley	Key Success Factors in Building "Lakefield Research Limited" into a Worldwide International Technology Knowledge Service Company
2004	Victor Uloth	Investigations into the Variability and Control of Dioxins Formation and Emissions from Coastal Power Boilers
2003	Murray Gray	
2002	Phillip J. Simmons	
2001	Hugo de Lasa	
2000	Enno Agur	
1999	Keith Marchildon	
1998	J.M. Hay	
1997	Laurier L. Schramm	
1996	M. A. Poirier	
1995	K.T. Chuang	
1994	Garry Rempel	
1993	P. Fink	
1992	Jacob Masliyah	
1991	T. Hoffman	
1990	A. W. Hyndman	
1989	DuPont Canada Inc.	
1988	N. E. Cooke	
1987	E. T. Tollefson	
1986	No award	
1985	J. Mardon	
1984	T. Courtnage	
1983	Sherritt Gordon Mines	
1982	H.C. Prime	
1981	R.S. Dudley	
1980	E. N. Banks	
1979	K. Pugi	
1978	R. F. Routledge	
1977	J. F. Gilbert	

The Canadian Journal of Chemical Engineering Lectureship Award

The Canadian Journal of Chemical Engineering Lectureship Award is awarded to a Canadian citizen or landed immigrant who has made an outstanding contribution to chemical engineering, demonstrating exceptional promise, while working in Canada. Eligible candidates must have held their first professional appointment as an independent researcher in academia, government, or industry for seven years or less at the time of nomination submission.

Terms of Reference

Deadline: December 2 of every year.

Sponsor: *The Canadian Journal of Chemical Engineering*

Award:

- A short bio of the award winner will be published in *The Can. J. Chem. Eng.* together with a feature paper written by the award winner summarizing his or her contributions in chemical engineering.
- A lecture tour to three North American universities or research centers. Up to $5,000 in travel costs for this tour will be reimbursed on application to *The Can. J. Chem. Eng.* Editor-in-Chief.

Nominations must include:

- **Citation (250 word maximum)** statement of why the candidate should receive the award. This is the key document in the nomination and this information should be relevant to the achievements for which the award is being offered.
- **Biographical Sketch (maximum one page)** this provides background information on the nominee and summarizes past accomplishments. This is a summary of information obtained from a C.V.
- Curriculum Vitae (maximum nine pages).
- **Supporting Letters (3 to 5)** At least two letters must be from outside the nominee's organization.

Membership in the Institute is not a prerequisite for this award.

All nominations will remain in force for three years. Nominators are responsible for keeping the record of the nominee up to date and complete.

Selection Committee

- *Can. J. Chem. Eng.* **Editor-in-Chief as non-voting chair**
- *Can. J. Chem. Eng.* Canadian **Associate Editors**

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

List of Recipients

Date	**Award Winner**
2016	Hongbo Zeng

D.G. Fisher Award

This award is presented to an individual who has made substantial contributions to the field of systems and control engineering while a resident of Canada. The award is given in recognition of significant contributions in any, or all, of the areas of theory, practice and education.

Terms of Reference

Deadline: February 28 of each year. For 2017, the deadline is March 15.

Sponsors: Department of Chemical and Materials Engineering, University of Alberta; Suncor Energy Foundation and Shell Canada Limited. Administered by the CIC's Chemical Education Fund.

Award: A plaque, $1,000 cash and reasonable expenses, to a maximum of $500.

Nomination must include:

- **Citation (250 word maximum)** statement of why the candidate should receive the award. This is the key document in the nomination and this information should be relevant to the achievements for which the award is being offered.
- **Biographical Sketch (maximum one page)** this provides background information on the nominee and summarizes past accomplishments. This is a summary of information obtained from a C.V.
- **Curriculum Vitae** (maximum nine pages).
-
- **Supporting Letters (3 to 5)** At least two letters must be from outside the nominee's organization.

The Award Selection Committee will select the award recipient based on the contributions by the nominee, letters of support and, where necessary, the solicited advice of experts.

Membership in the Institute is not a prerequisite for this award.

Award Selection Committee

- Vice-Chair of the Systems and Control Division (Chair of Committee)
- The remaining three committee members will be chosen so as to ensure adequate representation of the Canadian systems and control community.
- The members of the selection committee will be appointed to ensure that the committee contains at least one member from each of the following areas:

    - Canadian Industrial practitioners
    - Academics who hold a tenure track position at a Canadian university or a senior researcher from other Canadian institutions
    - Manitoba, Saskatchewan, Alberta, British Columbia, Yukon Territories, North West Territories or Nunavut,
    - Ontario, Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Newfoundland & Labrador.
    - Nominations will be solicited and members of the selection committee will be appointed each year by the executive of the Systems and Control Division of the CSChE. Sponsors shall have the option of designating a non-voting member to the selection committee.

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

The award shall be presented at the Canadian Chemical Engineering Conference. The recipient will be required to present an award lecture.

List of Recipients

Date	Award Winner	Award Lecture
2016	Paul Nomikos	Data Driven Value Creation
2015	Peter L. Douglas	The PSE of Things – Applications to Carbon Capture & Storage
2014	Hector Budman	Application of Polynomial Chaos Expansions to Robust Control and Robust

		Optimization of Chemical Processes
2013	Biao Huang	Real-time Predictive Inference of Critical Process Variables in the Prescence of Uncertainties
2012	No award presented	
2011	David Shook	A Practical Approach to Plant-Wide Control of a Hybrid System: Application to a Portable SAGD Plant
2010	J. Fraser Forbes	Plant-Wide Decision-Making: Distributing the Load
2009	Michel Perrier	Challenges in Biosystems Control and Optimization
2008	Thomas Marlin	A Robust MPC Approach to Supply Chain Optimization
2007	Barry Cott	Unit-Wide Model Predictive Control with SMOCPro
2006	Sirish L. Shah	Plant Health Management: the Role of Digital Automation Systems in Process Monitoring
2005	Thomas Harris	Interpretations and Analysis of Performance Bounds for Multivariable Systems
2004	David W. Bacon	
2003	Guy Dumont	
2002	Park Reilly	

Previously administered directly by the Systems and Control Division

2001	John F. MacGregor	

Hatch Innovation Award

The award shall be presented to a resident of Canada who has made a distinguished contribution to the field of chemical engineering while working in Canada. Nominees for this award shall not have reached the age of 40 by January of the year in which the nomination becomes effective.

Terms of Reference

Deadline: December 1 of each year.

Sponsor: Hatch

Award: A certificate and $2,000 cash.

Nominations must include:

- **Citation (250 word maximum)** statement of why the candidate should receive the award. This is the key document in the nomination and this information should be relevant to the achievements for which the award is being offered.
- **Biographical Sketch (maximum one page)** This provides background information on the nominee and summarizes past accomplishments. This is a summary of information obtained from a C.V.
- Curriculum Vitae (maximum nine pages).
- **Supporting Letters (3 to 5)** At least two letters must be from outside the nominee's organization.

All nominations will remain in force for three years. Nominators are responsible for keeping the record of the nominee up to date and complete.

Membership in the Institute is not a prerequisite for this award.

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

The award shall be presented annually at the Canadian Chemical Engineering Conference. The recipient will be asked to present an award lecture.

The recipient of the award is encouraged to submit to the Editor of The Canadian Journal of Chemical Engineering a manuscript based on the award lecture, having contents appropriate to the journal's objectives, for consideration of publication.

Selection Committee

- CSChE Director of Awards as non-voting Chair
- President, CSChE
- Two past winners of the Syncrude Award

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

List of Recipients

Date	Award Winner	Award Lecture
2016	Nathalie Tufenkji	Can Natural Extracts Help Us in the Fight against Antibiotic Resistence?
2015	Milica Radsic	Human Biowires and Injectable Tissues

Syncrude Canada Innovation Award

2014	Krishna Mahadevan	Model-based Engineeringof Metabolism
2013	Santiago Faucher	Mscromolecular Re-Engineering, an Alternate Path to Sustainability
2012	Edgar Acosta	*Did not present a lecture*
2011	Charles Xu	Forest Biorefinery—Maximizing the Value of Trees
2010	Ying Zheng	The Call of the Green: Transformation of Cleaner Fuels
2009	Josephine Hill	Why Catalysts are a Key Part of a Sustainable Future
2008	Janet Elliott	Thermodynamics: Everything Old is New Again

2007	Martin Guay	Adaptive Optimization Techniques for Control and Estimation
2006	Suzanne Kresta	Mixing as a Discipline: Emerging From the Essentials of Equipment Design to Fundamental Control of the Scale of Segregation
2005	Biao Huang	Dynamic Realization and Prediction in Fuel and Biomedical Cells
2004	Yonghao Ni	Technological Advances in the Brightening of High-Yield Pulps
2003	Molly Shoichet	Tissue Engineering Strategies for Spinal Cord Injury Repair
2002	Michael Cunningham	Challenges and Critical Issues in Heterogeneous Living Radical Polymerization
2001	Joao B.P. Soares	
2000	Costas Tzoganakis	
1999	Jesse Zhu	
1998	Rajinder Pal	
1997	William R. Cluett	
1996	Murray R. Gray	
1995	Basil D. Favis	
1994	David Lynch	
1993	Alexander Penlidis	
1992	J. Luong	
1991	Krishnaswamy (Kumar) Nandakumar	
1990	C. Roy	
1989	Sirish L. Shah	
1988	M. Sefton	
1987	Daniel De Kee	
1986	Axel Meisen	
1985	James F. Kelly	
1984	B. M. Sankey	
1983	John R. Grace	
1982	C. R. Phillips	
1981	Martin Ternan	
1980	R. Luus	
1979	A. Paul Watkinson	
1978	Edward Rhodes	
1977	B.B. Pruden	
1976	Michael E. Charles	
1975	C. Edward Capes	
1974	A. E. Hamielec	
1973	Murray Moo-Young	
1972	I. S. Pasternak	
1971	N. J. Themelis	
1970	T. W. Hoffman	

Process Safety Management Award

This award is presented to an individual who has made outstanding contributions in Canada to process safety and loss management.

Terms of Reference

Deadline: December 1 of each year

Sponsor: Atkins

Award: A framed scroll, cash prize of $1,500

In selecting the recipient of the award, the Committee will consider primarily the direct influence of the nominee's Process Safety and Loss Management (PSLM) work to the prevention of major industrial accidents in Canada. Meritorious performance of an administrative or indirect nature shall receive secondary consideration.

Nominations must include:

- **Citation (250 word maximum)** statement of why the candidate should receive the award. This is the key document in the nomination and this information should be relevant to the achievements for which the award is being offered.
- **Biographical Sketch (maximum one page)** This provides background information on the nominee and summarizes past accomplishments. This is a summary of information obtained from a C.V.
- Curriculum Vitae (maximum nine pages).
- **Supporting Letters (3 to 5)** At least two letters must be from outside the nominee's organization.

Suggested information to include in letter:

- state your relationship to the nominee, how long you've known that individual and your connection with him/her.
- outline the achievements of the nominee: what did he/she accomplish, when, where and the outcome.
- speak to the character of the nominee: leadership qualities, outreach to the community, etc,
- other personal information you deem important for this award.

Membership in the Institute is not a prerequisite for this award.

All nominations will remain in force for three years. Nominators are responsible for keeping the record of the nominee up to date and complete.

The award shall be presented annually at the Canadian Chemical Engineering Conference. The recipient will be asked to present an award lecture.

Selection Committee:

- CSChE Director of Awards as non-voting Chair
- Past President of the CSChE
- Chair of the PSM Division
- Immediate Past Chair of the PSM Division
- Most recent PSM Award winner

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

List of Recipients

Date	Award Winner	Award Lecture
2016	Richard Piette	Implementation of PSM Systems Rely On Strong Leadership Commitment to Succeed. Often the Need to Incorporate Strong Technical Capabilities is Forgotten
2015	David Guss	Implementing PSM – Where is the Finish Line?
2014	Faisal Khan	*did not present a lecture*
2013	Graeme Norval	Aspects of Changing the Safety Culture in Today's Universities
2012	Manuel Marta	Multiple Dust Explosions in B.C. – Opportunity to Understand Contributing Factors.

		At –Risk Safeguarding Measures and Systems, Standards, and Regulations
2011	Della Wong	Building Your Process Safety Engineering Experience
2010	Brian Kelly	Process Safety Beyond Regulations
2009	John Shrives	Reflection on Process Safety Management – A Regulator's Perspective
2008	Jan Windhorst	Econo-Technical Influences and Process Safety Management
2007	Ertugral Alp	Risk Assessment and PSM
2006	Laird Wilson	The Practical Essentials of Industrial Risk Management
2005	Gerry Phillips	Understanding and Applying the Science: A Case Study in Eliminating Process Fires
2004	Graham Creedy	Forty Shades of Grey, or Why Lewis Carroll is My Favourite Management Guru
2003	Jean-Paul Lacoursière	

R. S. Jane Memorial Award

This award is presented to a person who, while residing in Canada, has made an exceptional achievement in the field of chemical engineering or industrial chemistry.

Terms of Reference

This is the premier award of The Canadian Society for Chemical Engineering.

Deadline: December 1 of each year.

Sponsor: Canadian Society for Chemical Engineering.

Award: A scroll, $3,000 cash and registration fee to the CSChE Conference (No travel expenses will be reimbursed).

The recipient may become eligible for the award in a subsequent year, provided that he/she has made new significant contributions to chemical engineering or industrial chemistry in Canada.

Nominations must include:

- **Citation (250 word maximum)** statement of why the candidate should receive the award. This is the key document in the nomination and this information should be relevant to the achievements for which the award is being offered.
- **Biographical Sketch (maximum one page)** This provides background information on the nominee and summarizes past accomplishments. This is a summary of information obtained from a C.V.
- Curriculum Vitae (maximum nine pages).
- **Supporting Letters (3 to 5)** At least two letters must be from outside the nominee's organization.

Membership in the Institute is not a prerequisite for this award.

All nominations will remain in force for three years. Nominators are responsible for keeping the record of the nominee up to date and complete.

The award shall be presented annually at the Canadian Chemical Engineering Conference. The recipient will be asked to present an award lecture.

The recipient of the award is encouraged to submit to the Editor of The Canadian Journal of Chemical Engineering a manuscript based on the award lecture, having contents appropriate to the journal's objectives, for consideration of publication.

Selection Committee

- CSChE Director of Awards as non-voting Chair
- President of the CSChE
- Vice-President of the CSChE
- 2 past winners of the R. S. Jane Award

The award shall be presented annually unless the committee considers that no suitable candidate has been nominated.

The R .S. Jane Memorial Award was established in 1960 to commemorate the memory of the late Dr. Robert Stephen Jane who made an outstanding contribution to the chemical profession and the chemical industry in Canada.

List of Recipients

Date	Award Winner	Award Lecture
2016	Shiping Zhu	Polymer Reaction Engineering for Advanced Materials
2015	James Piret	Engineering for Protein and Cellular Therapy from nL to 1,000 L Bioreactors
2014	David P. Wilkinson	Growth of Electrochemical Engineering in a Clean Sustainable-Energy Future
2013	Jesse Zhu	Fluidization: the Past, the Present and the Future
2012	Michael Sefton	Blood, Guts and Chemical Engineering
2011	John F. MacGregor	Learning from Data—The Engineer's Achilles' Heel
2010	Douglas W. Reeve	
2009	Pierre Carreau	Rheological Behaviour of Polymer Nanocomposites

2008	Krishnaswamy (Kumar) Nandakumar	Multiphase Computational Fluid Dynamics: A New Tool to Aid in Scale Up of Chemical Processes
2007	Paul Watkinson	Asphaltenes, Gums and Coke: Deposition onto Surfaces During Processing of Hydrocarbons
2006	John L. Brash	Biomaterials: Protein-Surface Interactions and Biocompatibility
2005	James W. Smith	Culture Change and Innovation
2004	Hugo De Lasa	Photocatalysis: Light, Energy and the Environment
2003	Murray Moo-Young	Bioreactor Systems Design Revisited
2002	W.J. Murray Douglas	Life in the 100-micron Fast Lane: Adventures in Process and Materials Engineering
2001	Clifton A. Shook	
2000	Jacob Masliyah	
1999	K.T. Chuang	
1998	Garry Rempel	
1997	E.L. Tollefson	
1996	Maurice A. Bergougnou	
1995	John R. Grace	
1994	A.E. Hamielec	
1993	Clem Bowman	