

J. Christopher Beck, PhD, LEL, FAAAAI

Updated: May 7, 2025

University of Toronto
Department of Mechanical & Industrial Engineering
5 King's College Rd
Toronto, ON, Canada M5S 3G8

jcb@mie.utoronto.ca
tidel.mie.utoronto.ca
Phone: +1 (416) 946-8854

Education

University of Toronto

PhD, Computer Science, 1999.

MSc, Computer Science, 1994.

St. Francis Xavier University

BSc, Computer Science, 1992.

Employment

University of Toronto

Department of Mechanical & Industrial Engineering

Professor, 2015 – present.

Associate Chair Research, 2012 – 2015.

Associate Professor, 2009 – 2015.

Assistant Professor, 2004 – 2009.

With cross-appointment to the Department of Computer Science.

Universität Basel

Departement Mathematik und Informatik

Visiting Professor, 2025.

Technische Universiteit Delft

Department of Computer Science

Visiting Professor, 2024.

King's College London

Department of Informatics

Visiting Professor, 2017 – 2018.

Zuse Institute Berlin

Sabbatical Visitor, 2010 – 2011.

University College Cork

Cork Constraint Computation Center

Staff Scientist, 2002 – 2004.

ILOG, SA

Senior Scientist and Software Engineer, 1999 – 2002.

Publications Over 170 peer-reviewed papers in journals and conferences.
6 conference proceedings edited or co-edited.
Google Scholar Citations: 7764, h-index: 44.
See tidel.mie.utoronto.ca/publications.php.

Scholarly Addresses Over 300 national and international presentations since 2000.

Research Funding Over CAD\$7M as PI, co-PI, or collaborator since 2003.

Awards Fellow, 2025
Association for the Advancement of Artificial Intelligence.

Winner International Numeric Planning Competition, 2023
International Planning Competition, 2023.
Winner of Optimal, Agile, and Satisficing Tracks.

Best Paper Runner-up, 2023
33rd International Conference on Automated Planning and Scheduling for *Solving Domain-Independent Dynamic Programming Problems with Anytime Heuristic Search*.

Best Paper Award, 2023
20th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research for *Objective-Based Counterfactual Explanations for Linear Discrete Optimization*.

10-year Influential Paper Award, 2022
International Conference on Automated Planning and Scheduling awarded for *Improved Non-deterministic Planning Exploiting State Relevance* (ICAPS 2012).

Canadian Operations Research Society Student Paper Competition First Prize, 2020

INFORMS Computing Society Student Paper Award Runner Up, 2020

A Combinatorial Cut-and-Lift Procedure with an Application to 0-1 Chance Constraints (Student author: Margarita Castro).

Distinguished Paper Award, 2018
15th International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research for *Intruder Alert! Optimization Models for Solving the Mobile Robot Graph-Clear Problem*.

Awards continued **Distinguished/Outstanding Program Committee Member**
31st International Joint Conference on Artificial Intelligence, 2022.
24th AAAI Conference on Artificial Intelligence, 2010.

Distinguished Student Paper Award, 2016
22nd International Conference on the Principles and Practice of Constraint Programming for *A Constraint Programming Approach to Multi-Robot Task Allocation and Scheduling in Retirement Homes*.
(Student author: Kyle Booth).

Google Research Award, 2011
Integrating Dynamic Scheduling and Queueing for Data Centre Scheduling

Award of Excellence, 2009
Third International Competition on Knowledge Engineering for Planning and Scheduling for *From Requirements and Analysis to PDDL in itSIM-PLE3.0*.

Early Researcher Award, 2007
Ontario Ministry of Research and Innovation.

Rob Milne Memorial Award, 2006
Best Refereed Application Paper at the Twenty-Sixth International Conference of the British Computer Society's Specialist Group on Artificial Intelligence for *Managing Restaurant Tables Using Constraints*.

PLANET Prize for Research Excellence, 2001
European Conference on Planning for *Toward an Understanding of Local Search Cost in Job Shop Scheduling*.

Centennial Scholarship, 1992 – 1996
Natural Sciences and Engineering Research Council of Canada.

Governor-General's Gold Medal, 1992
St. Francis Xavier University.

Selected
Professional
Activities

Editorial Roles

Journal of Artificial Intelligence Research

Editor-in-Chief, 2024 – present.

Associate Editor-in-Chief, 2023 – 2024.

Associate Editor, 2010 – 2016.

Mathematical Programming Glossary, Editorial Board, 2009 – present.

Knowledge Engineering Review, Editorial Board, 2005 – 2015.

Constraints

Letters Editor 2010 – 2013.

Editorial Board, 2008 – 2013.

Special Issue Co-editor, **18**(2), 2013; **5**(4), 2000.

Journal of Scheduling, Associate Editor, 2005 – 2012.

Annals of Operations Research, Special Issue Co-editor, **171**(1), 2009.

Constraint Programming Letters, Area Editor, Editorial Board, 2006 – 2008.

Executive Committee of the Association for Constraint Programming

Past-President, 2023 – 2024.

President, 2021 – 2022.

Member, 2021 – 2024.

Executive Council of the

International Conference on Automated Planning and Scheduling

President, 2014 – 2016.

President-Elect, 2012 – 2014.

Conference Liaison, 2010 – 2012.

Member, 2008 – 2016.

INFORMS Computing Society Prize Committee

Chair, 2015.

Member, 2012 – 2015.

Grant Referee

Natural Sciences and Engineering Research Council of Canada, 2000 – 2025.

Belgian Fonds de la Recherche Scientifique (FNRS), 2024.

Canada Excellence Research Chair Program, 2018.

Netherlands Organization for Scientific Research, 2006, 2018.

Canada 150 Research Chair Program, 2017.

Israel Science Foundation, 2008, 2009, 2017, 2020, 2022.

Austrian Science Fund, 2015.

Swiss National Science Foundation, 2014.

German-Israeli Foundation for Scientific Research and Development, 2012.

Microsoft Research PhD Scholarship Program, 2007.

External Review Committee

United Arab Emirates Commission for Academic Accreditation, 2013, 2017, 2019.

NSERC Industrial Research Chairs Program, 2016.

Selected Conference Organization **International Conference on Automated Planning and Scheduling**
Program Co-chair, 2008, 2020.
(Senior) Program Committee, 2004 – 2025.

International Conference on the Principles and Practice of Constraint Programming

Program Chair, 2017.
(Senior) Program Committee, 2007, 2012 – 2025.

International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research

Program Co-Chair, 2006, 2011.
Program Committee, 2004 – 2025.

**Association for the Advancement of Artificial Intelligence
AAAI Conference**

Area Chair, 2019.
(Senior) Program Committee, 2006 – 2008, 2010, 2015, 2020.

International Joint Conference on Artificial Intelligence

Program Committee, 2019.

Symposium on Abstraction, Reformulation, and Approximation

Co-Chair, 2009.
Program Committee, 2005 – 2011.

Teaching Personnel

Current & Previous PDF, 12 supervised, 2 co-supervised.
PhD, 12 supervised, 11 co-supervised.
MAsc/MSc, 16 supervised, 11 co-supervised.
MEng, 6 supervised (project).
BASc, 20 supervised (thesis), 22 supervised (internship),
54 supervised (capstone project).

Courses

MIE1619, Constraint Programming and Hybrid Optimization, 2019, 2021, 2024.
MIE1619, Constraint Programming and Local Search, 2006 – 2010, 2012, 2014, 2016.
MIE562, Scheduling, 2005 – 2009, 2011 – 2016, 2018 – 2023.
APS106, Fundamentals of Computer Programming, 2010, 2012, 2015 – 2017, 2019 – 2024.
MIE350, Design and Analysis of Information Systems, 2004 – 2008.