J. Christopher Beck, PhD, LEL

Updated: April 30, 2024

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.

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.

Numetrix, Inc
Software Engineer, 1994 – 1995.

Publications

Over 170 peer-reviewed papers in journals and conferences.
6 conference proceedings edited or co-edited.
Google Scholar Citations: 7153, h-index: 44.
See tidel.mie.utoronto.ca/publications.php.

Scholarly Addresses

Over 290 national and international presentations since 2000.

Research Funding

Over CAD$5.8M as PI, co-PI, or collaborator since 2003.

Selected Awards

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*.

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).

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

Selected Professional Activities

Editorial Roles

Journal of Artificial Intelligence Research
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 – 2024.
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.
Chilean National Commission for Scientific and Technological Research, 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 – 2024.

International Conference on the Principles and Practice of Constraint Programming
Program Chair, 2017.
(Senior) Program Committee, 2007, 2012 – 2024.

International Conference on the Integration of Constraint Programming, Artificial Intelligence, and Operations Research
Program Co-Chair, 2006, 2011.
Program Committee, 2004 – 2024.

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 Current & Previous

Personnel
PDF, 12 supervised, 2 co-supervised.
PhD, 12 supervised, 10 co-supervised.
MASc/MSc, 14 supervised, 11 co-supervised.
MEng, 6 supervised (project).
BASc, 19 supervised (thesis), 22 supervised (internship), 50 supervised (capstone project).

Courses
MIE1619, Constraint Programming and Hybrid Optimization, 2019, 2021, 2023.
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.