Dr. Alice Lacaze-Masmonteil

Personal Information

Nationalities: Canadian and French

Current address: 3737 Wascana Pkwy, Regina, SK S4S 0A2, Canada

WEBSITE: https://alicelacaze-masmonteil.github.io

PHONE: +1 (902) 300-5770

EMAIL: alice.lacaze-masmonteil@uregina.ca

Pronouns: She/her/hers

ACADEMIC POSITIONS

University of Regina, Regina, SK, Canada

2024 - 2026

Pacific Institute for the Mathematical Sciences (PIMS) - Centre National de la

Recherche Scientifique (CNRS) Post-doctoral Fellow

Advisor: Karen Meagher

Monash University, Melbourne, VIC, Australia

2023

Visiting Ph.D. Student

EDUCATION

University of Ottawa, Ottawa, ON, Canada

2020 - 2024

Doctorate of Philosophy in Mathematics and Statistics

Advisor: Mateja Šajna

Thesis title: Certain resolvable directed cycle decompositions of

directed graphs

Acadia University, Wolfville, NS, Canada 2017 - 2019

Master's of Science

Advisor: Nancy E. Clarke

Thesis title: Some problems on the game of Ambush Cops and Robbers

Acadia University, Wolfville, NS, Canada

Bachelor of Pure and Applied Sciences with Honours

2012 - 2017

Publications

Journal Articles Published

[1] A. Lacaze-Masmonteil, Completing the solution of the directed Oberwolfach problem with cycles of equal length, *Journal of Combinatorial Designs*, **32** (2024), 5-30.

Journal Articles Under Review

- [2] D. Horsley and A. Lacaze-Masmonteil, Completing the solution of the directed Oberwolfach problem with two tables, submitted on August 2024.
- [3] A. Lacaze-Masmonteil, Decompositions of the wreath product of certain directed graphs into directed hamiltonian cycles, submitted on October 2024.
- [4] A. Lacaze-Masmonteil, Hamiltonian decompositions of the wreath product of hamiltonian decomposable digraphs, submitted on December 2024.

Fellowships, Scholarships, and Prizes

All monetary values are in Canadian dollars (CAD).

PIMS-CNRS Postdoctoral Fellowship

2024 - 2026

Valued at \$30,000 per year for two years with a contribution from the University of Regina and Prof. K. Meagher of \$32,000 per year.

University of Ottawa Department of Mathematics and Statistics Outstanding Student	2023
Paper Prize	
This prize is awarded annually to the best paper published by a student.	
Peter Rodney Memorial Book Prize	2023
Awarded to the best student talk given at the 27th Ontario Combinatorics Workshop.	
University of Ottawa Department of Mathematics and Statistics André Dabrowski Scholarship Fund	2023
Valued at \$1,400. Awarded to a student that demonstrated qualities of leadership.	
Natural Sciences and Engineering Research Council of Canada (NSERC) Michael Smith Foreign Study Supplement	2023
Valued at \$6,000. Awarded to fund visit to Monash University in Melbourne Australia.	
NSERC Canada Graduate Scholarship - Doctoral	2021 - 2024
Valued at \$35,000 per year for a duration of three years.	
Catherine Stanley Memorial Scholarship	2018
Awarded to a student that demonstrated excellence as a teaching assistant.	
NSERC Canada Graduate Scholarship - Master's program Valued at \$17,500 for a duration of one year.	2017 - 2018
Acadia Undergraduate Mathematics Competition: Best Paper	2016

PRESENTATIONS

Conference Presentations

- Completing the solution to the directed Oberwolfach problem with two tables, Scientific Session on Design Theory: 2024 CMS Winter Meeting, Vancouver, BC, (December 2024).
- Hamiltonian decompositions of the wreath product of two hamiltonian decomposable directed graphs, BIRS Movement and Symmetry in Graphs Workshop, Banff, AB, (November 2024).
- Hamiltonian decompositions of the wreath product of two hamiltonian decomposable directed graphs, Women in Combinatorics Virtual Conference, Online, (July 2024).
- On the directed Oberwolfach problem with two tables, 45th Australasian Combinatorics Conference, Perth, WA, Australia, (December 2023).
- Resolution of the directed Oberwolfach problem with cycles of uniform length, 10th Slovenian Conference on Graph Theory: Combinatorial Designs and their Applications Mini Symposium, Kranjska Gora, Slovenia, (June 2023).
- Resolution of the directed Oberwolfach problem with cycles of uniform length, 2023 Canadian Mathematical Society Summer Meeting: Design Theory and Graph Decomposition Session, Ottawa, ON, Canada, (June 2023).
- Resolution of the directed Oberwolfach problem with cycles of uniform length, 27th Ontario Combinatorics Workshop, Ottawa, ON, Canada, (May 2023).
- Resolvable directed cycle decompositions of the complete symmetric digraph, 2022 Canadian Mathematical Society Summer Meeting: Design Theory and Graph Decomposition Session, St. John's, NL, Canada, (June 2022).
- Resolvable directed cycle decompositions of the complete symmetric digraph, 26th Ontario Combinatorics Workshop, Waterloo, ON, Canada, (May 2022).
- The game of Ambush Cops and Robbers played on chordal graphs and outerplanar graphs, 25th Ontario Combinatorics Workshop, Online, (May 2021).
- The game of Ambush Cops and Robbers played on the products of graphs, 2018 Canadian Mathematical Society Winter Meeting: Student Committee Research Session, Vancouver, BC, Canada, (December 2018).
- On the cordiality of various unions of complete graphs, 12th East Coast Combinatorics Conference, Saint John, NB, Canada, (July 2017).

Seminars

- On the two-table case of the directed Oberwolfach problem, AARMS Atlantic Graph Theory Seminar, Online, (November 2024).
- On recent advances on the directed Oberwolfach problem, University of Lethbridge PIMS-Lethbridge Number Theory and Combinatorics seminar, Lethbridge, AB, (October 2024).
- Adapting Häggkvist-style constructions to the directed Oberwolfach problem, Emergent Research: The PIMS Postdoctoral Fellow Seminar, Online, (October 2024).
- On the directed Oberwolfach problem, Monash University Discrete Mathematics Seminar, Melbourne, VIC, Australia, (October 2023).

TEACHING

University of Regina, Regina, SK, Canada

 $Sessional\ Instructor$

Courses (taught in English):

MATH 223: Introduction to Abstract Algebra (35 students)
 MATH 122: Linear Algebra 1 (51 students)
 Fall 2024

University of Ottawa, Ottawa, ON, Canada

Part-time Professor

Courses (taught in French):

• MAT 1741: Introduction to Linear Algebra (170 students) Winter 2023

University of Ottawa, Ottawa, ON, Canada

Laboratory Teaching Assistant

Courses (taught in French):

• MAT 1741: Introduction to Linear Algebra	Fall 2021
• MAT 1762: Mathematical Reasoning and Proofs	Fall 2021
• Mathematics and Statistics Help Center	Summer 2021
• Mathematics and Statistics Help Center	Winter 2020
• MAT 1741: Introduction to Linear Algebra	Fall 2020

Acadia University, Wolfville, NS, Canada

Laboratory Teaching Assistant

Courses (taught in English):

• MATH 1013: Introductory Calculus I	Fall 2018
• MATH 2243: Applied Statistics for Life Sciences I	Fall 2018
• MATH 2213: Applied Probability for Science and Engineering I	Fall 2018
• Mathematics and Statistics Help Center	Fall 2018
• Mathematics and Statistics Help Center	Winter 2018
• Mathematics and Statistics Help Center	Fall 2017
• MATH 1013: Introductory Calculus I	Fall 2017
• MATH 2243: Applied Statistics for Life Sciences I	Fall 2017
• Mathematics and Statistics Help Center	Winter 2017
• MATH 2253: Applied Statistics for Life Sciences II	Winter 2017
• MATH 1023: Introductory Calculus II	Winter 2017
• Mathematics and Statistics Help Center	Fall 2016
• MATH 2213: Applied Probability for Science and Engineering I	Fall 2016
MATH 1023: Introductory Calculus II	Winter 2016

ACADEMIC SERVICE

Referee for the following journals and publications:

- Discussiones Mathematicae Graph Theory.
- Bulletin of the Institute of Combinatorics and its Applications.

University of Regina Day - Mathematics Outreach $Presenter$	2024
Canadian Open Mathematical Competition $Grader$	2024
Women in Combinatorics Virtual Conference Combinatorial Designs Session co-organizer	2024
2023 Canadian Mathematical Society Summer Meeting Design Theory and Graph Decomposition Session co-organizer	2023
Canadian Mathematical Society Student Committee $Chair$	2022 - 2024
University of Ottawa Mathematics and Statistics Graduate Student Association Executive $\ensuremath{\textit{President}}$	2022 - 2023
16th Ottawa Mathematics and Statistics Conference Lead organizer	2022 - 2023
27th Ontario Combinatorics Workshop Co-organizer	2022 - 2023
15th Ottawa Mathematics and Statistics Conference Co-organizer	2021 - 2022
Canadian Mathematical Society Student Committee Member	2021 - 2022
University of Ottawa Mathematics and Statistics Graduate Student Association Executive $\begin{tabular}{ll} Vice-president\ external \end{tabular}$	2020 - 2022
14th Ottawa Mathematics and Statistics Conference Co-organizer	2020 - 2021
Acadia's 5th Student Research and Innovation Conference Co-organizer	2017 - 2018
Acadia Graduate Student Association Executive Committee Science representative	2017 - 2018
Acadia Math Outreach Student volunteer	2016 - 2018
Acadia Math Society President	2015 - 2016