Dr. Alice Lacaze-Masmonteil

Personal Information

Nationalities:	Canadian and French
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Pronouns:	She/her/hers

Education

2020 - 2024	University of Ottawa, Ottawa, ON, Canada PhD in Mathematics and Statistics Advisor: Mateja Šajna Thesis title: Certain resolvable directed cycle decompositions of directed graphs
2017 - 2019	Acadia University, Wolfville, NS, Canada Master's of Science
2012 - 2017	Acadia University, Wolfville, NS, Canada Bachelor of Pure and Applied Sciences with Honours

Academic Positions

2024 - 2026	University of Regina, Regina, SK, Canada Pacific Institute for the Mathematical Sciences- Centre national de la recherche scientifique (PIMS-CNRS) Postdoctoral Fellow Advisor: Karen Meagher
2023	Monash University, Melbourne, VIC, Australia Visiting PhD Student

Publications

Journal Articles Published

[1] **A. Lacaze-Masmonteil**, Decompositions of the wreath product of certain directed graphs into directed hamiltonian cycles, to appear in *Ars Mathematicae Contemporanea*.

[2] **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

[3] **A. Lacaze-Masmonteil**, Hamiltonian decompositions of the wreath product of hamiltonian decomposable digraphs, submitted December 2024.

[4] D. Horsley and **A. Lacaze-Masmonteil**, Completing the solution of the directed Oberwolfach problem with two tables, submitted August 2024.

Fellowships, Scholarships, and Prizes

All monetary values are in Canadian dollars (CAD).

2025	University of Ottawa Department of Mathematics and Statistics PhD Thesis Award This prize is awarded annually to the best doctoral thesis in the department of mathematics and statistics.
2024-2026	PIMS-CNRS Postdoctoral Fellowship 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.
2023	University of Ottawa Department of Mathematics and Statistics Outstanding Student Paper Prize This prize is awarded annually to the best paper published by a student.
2023	Peter Rodney Memorial Book Prize Awarded to the best student talk given at the 27th Ontario Combinatorics Workshop.
2023	University of Ottawa Department of Mathematics and Statistics André Dabrowski Scholarship Fund Valued at $1,400. Awarded to a student that demonstrated qualities of leadership.
2023	Natural Sciences and Engineering Research Council of Canada (NSERC) Michael Smith Foreign Study Supplement Valued at $6,000. Awarded to fund visit to Monash University in Melbourne Australia.
2021-2024	NSERC Canada Graduate Scholarship - Doctoral Valued at $35,000 per year for a duration of three years.
2018	Catherine Stanley Memorial Scholarship Awarded to a student that demonstrated excellence as a teaching assistant.
2017-2018	NSERC Canada Graduate Scholarship - Master's program Valued at $17,500 for a duration of one year
2016	Acadia Undergraduate Mathematics Competition: Best Paper

Mentorship

2025	University of Regina, Regina, SK, Canada Undergraduate summer students mentor Organized a bi-weekly seminar series on scientific communication skills for all undergraduate summer students in mathematics.

Presentations

Conference Presentations

Dec. 2024 — 2024 Canadian Mathematical Society Winter Meeting: Scientific Session on Combinatorial Designs, *Completing the solution to the directed Oberwolfach problem with two tables*, Vancouver, BC, Canada.

Nov. 2024 — Banff International Research Station: Movement and Symmetry in Graphs Workshop, *Hamiltonian decompositions of the wreath product of two hamiltonian decomposable directed graphs*, Banff, AB, Canada.

July 2024 — Women in Combinatorics Virtual Conference, *Hamiltonian decompositions of the wreath product of two hamiltonian decomposable directed graphs*, Online.

Dec. 2023 — 45th Australasian Combinatorics Conference, *On the directed Oberwolfach problem with two tables*, Perth, WA, Australia.

June 2023 — 10th Slovenian Conference on Graph Theory: Combinatorial Designs and their Applications Mini Symposium, *Resolution of the directed Oberwolfach problem with cycles of uniform length*, Kranjska Gora, Slovenia.

May 2023 — 2023 Canadian Mathematical Society Summer Meeting: Design Theory and Graph Decomposition Session, *Resolution of the directed Oberwolfach problem with cycles of uniform length*, Ottawa, ON, Canada.

May 2023 — 27th Ontario Combinatorics Workshop, *Resolution of the directed Oberwolfach problem with cycles of uniform length*, Ottawa, ON, Canada.

June 2022 — 2022 Canadian Mathematical Society Summer Meeting: Design Theory and Graph Decomposition Session, *Resolvable directed cycle decompositions of the complete symmetric digraph*, St. John's, NL, Canada.

May 2022 — 26th Ontario Combinatorics Workshop, *Resolvable directed cycle decompositions of the complete symmetric digraph*, Waterloo, ON, Canada.

May 2021 — 25th Ontario Combinatorics Workshop, *The game of Ambush Cops and Robbers played on chordal graphs and outerplanar graphs*, Online.

Seminars

Apr. 2025 — PIMS Postdoctoral Summit, *On the perfect matching association scheme*, Calgary, AB, Canada.

Nov. 2024 — AARMS Atlantic Graph Theory Seminar, *On the two-table case of the directed Oberwolfach problem*, Online.

Oct. 2024 — University of Lethbridge PIMS-Lethbridge Number Theory and Combinatorics Seminar, *On recent advances on the directed Oberwolfach problem*, Lethbridge, AB, Canada.

Oct. 2024 PIMS Emergent Research: The PIMS Postdoctoral Fellow Seminar, *Adapting Häggkvist-style constructions to the directed Oberwolfach problem*, Online.

Oct. 2023 Monash University Discrete Mathematics Seminar, *On the directed Oberwolfach problem*, Melbourne, VIC, Australia.

Teaching

University of Regina, Regina, SK, Canada
Sessional Instructor
Courses (taught in English):

MATH 221: Introduction to Proofs and Problem Solving	Fall 2025	100 students
MATH 223: Introduction to Abstract Algebra	Winter 2025	23 students
MATH 122: Linear Algebra 1	Fall 2024	51 students

University of Ottawa, Ottawa, ON, Canada
Part-time Professor
Courses (taught in French):

MAT 1741: Introduction to Linear Algebra	Winter 2023	170 students

Academic Service

Refereeing

2024	Springer Proceedings in Mathematics & Statistics Bulletin of the Institute of Combinatorics and its Applications
2023	Discussiones Mathematicae Graph Theory

Conferences and workshops organization

2025 2025 Canadian Discrete and Applied Mathematics Conference
Combinatorial Designs and Graph Decompositions Scientific Session Co-organizer

2024 Women in Combinatorics Virtual Conference
Combinatorial Designs Session co-organizer

2023 2023 Canadian Mathematical Society Summer Meeting
Design Theory and Graph Decomposition Session co-organizer

2023 16th Ottawa Mathematics and Statistics Conference
Lead organizer

2023 27th Ontario Combinatorics Workshop
Co-organizer

2022 15th Ottawa Mathematics and Statistics Conference
Co-organizer

2021 14th Ottawa Mathematics and Statistics Conference

Co-organizer

Committees

2022-2024 Canadian Mathematical Society Student Committee
Chair

2022-2023 University of Ottawa Mathematics and Statistics Graduate Student Association Executive
President

2021-2022 Canadian Mathematical Society Student Committee
Member

2020-2022 University of Ottawa Mathematics and Statistics Graduate Student Association Executive
Vice-President External

Mathematics outreach

2025 2025 Canadian Discrete and Applied Mathematics Conference
Women in combinatorics mentorship lunch co-organizer

2025 Math Kangaroo Contest
Invigilator

2025 Pi Day at the Saskatchewan Science Centre
Presenter

2024 University of Regina Day - Mathematics Outreach
Presenter

2024 Canadian Open Mathematical Competition
Grader

Programing Languages

Intermediate: Python, R, HTML, LaTeX.

Beginner: GAP.