Dr. Alice Lacaze-Masmonteil

PIMS-CNRS Postdoctoral Fellow

✉ Alice.Lacaze-Masmonteil@uregina.ca   🌐 https://alicelacaze-masmonteil.github.io
🌐 Canadian and French   Pronouns: She/her

Education

University of Ottawa   **Ottawa, ON, Canada**
PhD in Mathematics and Statistics   2020-2024

Advisor: Mateja Šajna
Thesis: Certain resolvable directed cycle decompositions of directed graphs

Acadia University   **Wolfville, NS, Canada**
Master of Science - Mathematics   2017-2019

Academic Positions

University of Auckland   **Auckland, New Zealand**
Postdoctoral Fellow   2026-2029

University of Regina   **Regina, SK, Canada**
Pacific Institute for the Mathematical Sciences- Centre National de la Recherche Scientifique   2024-2026
(PIMS-CNRS) Postdoctoral Fellow
Advisor: Karen Meagher

Research visits

Monash University   **Melbourne, Australia**
Visited Daniel Horsley for 5 months.   2023

Research Interests

My main area of research is discrete mathematics. Namely, I am specialized in cycle decomposition problems.

Publications

Journal Articles Published

[1] **A. Lacaze-Masmonteil**, Hamiltonian decompositions of the wreath product of hamiltonian decomposable digraphs, *Discrete Mathematics*, **349** (2026), 115012.

[2] D. Horsley and **A. Lacaze-Masmonteil**, Completing the solution of the directed Oberwolfach problem with two tables, to appear in *Electronic Journal of Combinatorics*.

[3] **A. Lacaze-Masmonteil**, Decompositions of the wreath product of certain directed graphs into directed hamiltonian cycles, *Ars Mathematicae Contemporanea*, **26 (2)** (2026)

[4] **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

[5] H. Gupta, A. Herman, **A. Lacaze-Masmonteil**, R. Maleki, K. Meagher On the second largest eigenvalue of certain graphs in the perfect matching association scheme, submitted October 2025.

Fellowships, Prizes, and Scholarships

All monetary values are given in Canadian Dollar (CAD).

○ University of Ottawa Department of Mathematics and Statistics PhD Thesis Award (2025)
  - Awarded to the best doctoral thesis in the department of mathematics and statistics.
○ PIMS-CNRS Postdoctoral Fellowship (2024-2026)

- Valued at $62,000 per year.
- University of Ottawa Mathematics and Statistics Outstanding Student Paper Prize (2023)
  - 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 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)
  - National research scholarship valued at $6,000 to fund visit to Monash University in Melbourne Australia.
- NSERC Canada Graduate Scholarship - Doctoral (2021-2024)
  - National research scholarship valued at $35,000 per year.
- Catherine Stanley Memorial Scholarship (2018)
  - Awarded to a student that demonstrated excellence as a teaching assistant.
- NSERC Canada Graduate Scholarship - Master's program (2017)
  - Institutional research scholarship valued at $17,500.

Mentorship

Semesters are given in terms of the standard North American academic calendar.

University of Regina   **Regina, SK, Canada**
Undergraduate summer students mentor   Summer 2025
Created a seminar series on scientific communication skills for undergraduate summer students in mathematics.

Teaching

University of Regina   **Regina, SK, Canada**
Sessional Instructor   2024-Present
Courses (taught in english):
MATH 828: Combinatorics   Fall 2025
MATH 221: Introduction to Proofs and Problem Solving   Fall 2025
MATH 223: Introduction to Abstract Algebra   Winter 2025
MATH 122: Linear Algebra 1   Fall 2024

University of Ottawa   **Ottawa, ON, Canada**
Part-time professor   2023
Courses (taught in French):
MAT 1741: Introduction to Linear Algebra   Winter 2023

Presentations

Invited Conference Presentations
- 2025 Canadian Mathematical Society Winter Meeting: Algebraic Graph Theory Scientific Session, Toronto, ON, Canada, (Dec. 2025).
- 10th Cracow Conference on Graph Theory: Design Theory Session, Cracow, Poland, (Sep. 2025).
- Canadian Discrete and Algorithmic Mathematics Conference 2025: From Puzzles to Proofs: Connecting the Dots with Combinatorics, Ottawa, ON, Canada, (May 2025).
- 2024 Canadian Mathematical Society Winter Meeting: Combinatorial Designs Scientific Session, Vancouver, BC, Canada, (Dec. 2024).
- Banff International Research Station: Movement and Symmetry in Graphs Workshop, Banff, AB, Canada, (Nov. 2024).
- 10th Slovenian Conference on Graph Theory: Combinatorial Designs and their Applications Mini Symposium, Kranjska Gora, Slovenia, (June 2023).
- 2022 Canadian Mathematical Society Summer Meeting: Design Theory and Graph Decomposition Scientific Session, St. John's, NL, Canada, (June 2022).

Contributed Conference Presentations
- 2025 Canadian Mathematical Society Winter Meeting: Combinatorial Designs Scientific Session, Toronto, ON, Canada, (Dec. 2025).
- Women in Combinatorics Virtual Conference, Online, (July 2024).

- 45th Australasian Combinatorics Conference, Perth, WA, Australia, (Dec. 2023).
- 2023 Canadian Mathematical Society Summer Meeting: Design Theory and Graph Decomposition Session, Ottawa, ON, Canada, (June 2023).
- 27th Ontario Combinatorics Workshop, Ottawa, ON, Canada, (May 2023).
- 26th Ontario Combinatorics Workshop, Waterloo, ON, Canada, (May 2022).
- 25th Ontario Combinatorics Workshop, Online, (June 2021).

Seminars

- University of Manitoba Department of Mathematics Colloquium, Winnipeg, MB, Canada, (Nov. 2025).
- University of Victoria Discrete Mathematics Seminar, Victoria, BC, Canada, (Nov. 2025).
- PIMS Postdoctoral Summit, Calgary, AB, Canada, (Apr. 2025).
- AARMS Atlantic Graph Theory Seminar, Online, (Nov. 2024).
- Lethbridge Number Theory and Combinatorics Seminar Lethbridge, AB, Canada, (Oct. 2024).
- PIMS Emergent Research: The PIMS Postdoctoral Fellow Seminar, Online, (Oct. 2024).
- Monash University Discrete Mathematics Seminar, Melbourne, VIC, Australia, (Oct. 2023).

Selected Service

Referee for the following publications: Australasian Journal of Combinatorics, Journal of Combinatorial Designs, Graphs and Combinatorics, Bulletin of the Institute of Combinatorics and its Applications, Discussiones Mathematicae Graph Theory.

2026 Prairie Discrete Mathematics Workshop *Co-organizer*	2026
Math Kangaroo training camp (Grades 3 and 4) *Facilitator*	2026
2025 Canadian Mathematical Society (CMS) Winter Meeting *Combinatorial Design Theory Session co-organizer*	2025
Canadian Discrete and Algorithmic Mathematics Conference 2025 *Women in combinatorics mentorship lunch co-organizer*	2025
Canadian Discrete and Algorithmic Mathematics Conference 2025 *Combinatorial Designs and Graph Decompositions Scientific Session co-organizer*	2025
Pi Day at the Saskatchewan Science Centre *Facilitator*	2025
University of Regina Day - Mathematics Outreach *Facilitator*	2024
Women in Combinatorics Virtual Conference *Combinatorial Designs Session co-organizer*	2024
2023 CMS Summer Meeting *Design Theory and Graph Decomposition Session co-organizer*	2023
27th Ontario Combinatorics Conference *Co-organizer*	2023
Canadian Mathematical Society Student Committee *Chair*	2022-2024
UO Mathematics and Statistics Graduate Student Association Executive *President*	2022-2023
Ottawa Mathematics and Statistics Conference *Co-organizer*	2021-2023

References

- Karen Meagher, University of Regina
- Daniel Horsley, Monash University
- Mateja Šajna, University of Ottawa
- Shaun Fallat, University of Regina, (Teaching/service reference)