

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

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|---|---|
| University of Ottawa <i>PhD in Mathematics and Statistics</i> Advisor: Mateja Šajna Thesis: Certain resolvable directed cycle decompositions of directed graphs | Ottawa, ON, Canada 2020-2024 |
| Acadia University <i>Master of Science - Mathematics</i> Advisor: Nancy E. Clarke Thesis: Some problems on the game of Ambush Cops and Robbers | Wolfville, NS, Canada 2017-2019 |
| Acadia University <i>Bachelor of Pure and Applied Sciences</i> | Wolfville, NS, Canada 2012-2016 |

Academic Positions

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| University of Regina <i>Pacific Institute for the Mathematical Sciences- Centre National de Recherche Scientifique (PIMS-CNRS) Post-doctoral Fellow</i> Advisor: Karen Meagher | Regina, SK, Canada 2024-2026 |
| Monash University <i>Visiting PhD student</i> Advisor: Daniel Horsley | Melbourne, VIC, Australia 2023 |

Research Interests

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

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, Prizes, Scholarship

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)
 - Valued at \$6,000. Funded visit to Monash University in Melbourne Australia.
- NSERC Canada Graduate Scholarship - Doctoral (2021-2024)
 - 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)
 - Valued at \$17,500.

Mentorship

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

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

Teaching

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| University of Regina | Regina, SK, Canada |
| <i>Sessional Instructor</i> | 2024-Present |
| Courses (taught in english): | |
| 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 |
| <i>Part-time professor</i> | 2023 |
| Courses (taught in French): | |
| MAT 1741: Introduction to Linear Algebra | Winter 2023 |

Presentations

Invited Conference Presentations

- Canadian Discrete and Algorithmic Mathematics Conference 2025: From Puzzles to Proofs: Connecting the Dots with Combinatorics Scientific Session, Ottawa, ON, Canada, (May 2025).
- 2024 Canadian Mathematical Society Winter Meeting: Scientific Session on Combinatorial Designs, 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 Session, St. John's, NL, Canada, (June 2022).

Contributed Conference Presentations

- 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





- 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).

Service

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

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| Canadian Discrete and Applied Mathematics Conference 2025 <i>Women in combinatorics mentorship lunch co-organizer</i> | 2025 |
| Canadian Discrete and Applied Mathematics Conference 2025 <i>Combinatorial Designs and Graph Decompositions Scientific Session co-organizer</i> | 2025 |
| Pi Day at the Saskatchewan Science Centre <i>Facilitator</i> | 2025 |
| University of Regina Day - Mathematics Outreach <i>Facilitator</i> | 2024 |
| Women in Combinatorics Virtual Conference <i>Combinatorial Designs Session co-organizer</i> | 2024 |
| 27th Ontario Combinatorics Conference <i>Co-organizer</i> | 2023 |
| Canadian Mathematical Society Student Committee <i>Chair</i> | 2022-2024 |
| UO Mathematics and Statistics Graduate Student Association Executive <i>President</i> | 2022-2023 |
| Ottawa Mathematics and Statistics Conference (OMSC) <i>Co-organizer</i> | 2021-2023 |

References

- Karen Meagher, University of Regina  karen.meagher@uregina.ca
- Daniel Horsley, Monash University  daniel.horsley@monash.edu
- Mateja Šajna, University of Ottawa  mateja.sajna@uottawa.ca
- Shaun Fallat, University of Regina, (Teaching/service reference)  shaun.fallat@uregina.ca