

# Maxence Mayrand

## Curriculum Vitae | January 2026

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webpage <https://maxencemayrand.github.io>

## Employment

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**Université de Sherbrooke | Assistant Professor** 2022–present  
Département de mathématiques

**University of Toronto | Postdoctoral Fellow** 2019–2022  
Department of Mathematics, Geometric Structures Laboratory  
Mentor: Prof. Marco Gualtieri

## Education

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**University of Oxford | DPhil in Mathematics** 2015–2019  
Supervisor: Prof. Andrew Dancer

**McGill University | BSc Honours Mathematics** 2012–2015

## Papers

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- [1] Maiza, M.M., Mayrand, M., *Lax-Kirchhoff moduli spaces and Hamiltonian 2D TQFT*.  
[arXiv:2510.23567](#)
- [2] Burelle, J-P., Maiza, M.M., Mayrand, M., *Deformations of quasi-Hamiltonian spaces*.  
[arXiv:2505.16689](#)
- [3] Crooks, P., Mayrand, M., *Grothendieck-Springer resolutions and TQFTs*.  
[arXiv:2504.10285](#)
- [4] Crooks, P., Mayrand, M., *The Moore-Tachikawa conjecture via shifted symplectic geometry*.  
[arXiv:2409.03532](#)
- [5] Crooks, P., Mayrand, M., *Scheme-theoretic coisotropic reduction*.  
[arXiv:2408.11932](#)
- [6] Mayrand, M., *Shifted coisotropic structures for differentiable stacks*.  
[Advances in Mathematics](#), **475** (2025)
- [7] Bălibanu, A., Mayrand, M., *Reduction along strong Dirac maps*.  
Proceedings of the London Mathematical Society (to appear)  
[arXiv:2210.07200](#)
- [8] Crooks, P., Mayrand, M., *Symplectic reduction along a submanifold*.  
[Compositio Mathematica](#), **158** (2022)
- [9] Mayrand, M., *Hyperkähler metrics near Lagrangian submanifolds and symplectic groupoids*.  
[J. Reine Angew. Math. \(Crelle's Journal\)](#), **782** (2022)

- [10] Mayrand, M., *Kempf–Ness type theorems and Nahm equations*.  
[Journal of Geometry and Physics](#), **136** (2019)
- [11] Mayrand, M., *Stratification of singular hyperkähler quotients*.  
[Complex Manifolds](#), **9** (2022)
- [12] Mayrand, M., *Stratified hyperkähler spaces from semisimple Lie algebras*.  
[Transformation Groups](#), **25** (2020)
- [13] Mayrand, M., *Particle motion in monopoles and geodesics on cones*.  
[Symmetry, Integrability and Geometry: Methods and Applications \(SIGMA\)](#), **10** (2014)

## PhD thesis (University of Oxford, 2019)

*Stratified hyperkähler spaces and Nahm’s equations*

PDF available [here](#)

## Research teams

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- [CRM](#) | Centre de recherches mathématiques
- [CIRGET](#) | Centre interuniversitaire de recherches en géométrie et topologie
- [SAG](#) | Équipe de recherche en structures algébriques et géométriques à Sherbrooke

## Research grants

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| <ul style="list-style-type: none"> <li>• FRQNT Team Research Project (\$150,000)<br/>With Vestislav Apostolov, Julien Keller, and Frédéric Rochon</li> </ul> | 2024–2027 |
| <ul style="list-style-type: none"> <li>• NSERC Discovery Grant (\$150,000)</li> </ul>  | 2023–2028 |
| <ul style="list-style-type: none"> <li>• NSERC Discovery Launch Supplement (\$12,500)</li> </ul>   | 2023–2024 |

## Scholarships and awards

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### University of Toronto

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| <ul style="list-style-type: none"> <li>• F. V. Atkinson Teaching Award</li> </ul>           | June 2021 |
| <ul style="list-style-type: none"> <li>• NSERC Postdoctoral Fellowship</li> </ul>           | 2019–2021 |
| <ul style="list-style-type: none"> <li>• FRQNT Postdoctoral Research Scholarship</li> </ul> | 2019–2021 |

### Pacific Institute for the Mathematical Sciences

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| <ul style="list-style-type: none"> <li>• PIMS Postdoctoral Fellowship (declined)</li> </ul> | 2019–2021 |
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### University of Oxford

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| <ul style="list-style-type: none"> <li>• Moussouris Scholarship<br/>Full scholarship (tuition fees and living expenses)<br/>Awarded by the University of Oxford</li> </ul> | 2015–2019 |
| <ul style="list-style-type: none"> <li>• NSERC CGS D (declined)<br/>Alexander Graham Bell Canada Graduate Scholarships</li> </ul>  | 2017–2019 |
| <ul style="list-style-type: none"> <li>• NSERC PGS D<br/>Postgraduate Scholarships–Doctoral Program</li> </ul>   | 2017–2019 |

- FRQNT Doctoral Scholarship (declined) 2017–2019
- FRQNT Master Scholarship 2015–2017

### McGill University

- Dean's Honour List May 2015
- First Class Honours in Mathematics May 2015
- Gowrisankaran Prize in Mathematics and Statistics May 2015
- NSERC Undergraduate Student Research Award Summer 2014
- Kamran Undergraduate Award Summer 2013

## Teaching

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### Université de Sherbrooke

- Équations différentielles (MAT528) Winter 2026
- Analyse I (MAT129) Winter 2026
- Théorie quantique (MAT458) Fall 2025
- Théorie quantique (MAT458) Fall 2024
- Analyse II (MAT346) Fall 2024
- Analyse I (MAT129) Winter 2024
- Analyse réelle (MAT189) Winter 2024
- Géométrie différentielle (MAT603) Fall 2023
- Analyse réelle (MAT189) Winter 2023
- Équations différentielles (MAT528) Winter 2023

### University of Toronto

- Complex Variables (MAT334) Winter 2022
- Introduction to Combinatorics (MAT344) Fall 2021
- Introduction to Combinatorics (MAT344) Fall 2020
- Concepts in Abstract Mathematics (MAT246) Winter 2020

### Jesus College, University of Oxford

- Group Theory Spring 2019
- Groups and Group Actions Winter and Spring 2019
- Linear Algebra II Winter 2019
- Topology Winter 2019
- Linear Algebra I Fall 2018
- Introduction to University Mathematics Fall 2018
- Introduction to Complex Numbers Fall 2018

### Mathematical Institute, University of Oxford

Tutor:

- Lie Algebras Spring 2017
- Lie Algebras Fall 2017

Teaching assistant:

- Commutative Algebra Winter 2018
- Representation Theory of Semisimple Lie Algebras Winter 2017
- Lie Algebras Fall 2016

# Talks

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1. *Scheme-theoretic coisotropic reduction* 21 Nov 2024  
Gamma seminar  
University of Warsaw
2. *The Moore-Tachikawa conjecture via shifted symplectic geometry* 24 Oct 2024  
Mathematical physics seminar  
Perimeter Institute for Theoretical Physics
3. *The Moore-Tachikawa conjecture via shifted symplectic geometry* 15 Jul 2024  
Workshop on Hamiltonian Geometry and Quantization, The Fields Institute
4. *Shifted coisotropic structures and Moore–Tachikawa TQFTs* 13 Mar 2024  
CIRGET, Algebraic Geometry Seminar
5. *Shifted coisotropic structures for differentiable stacks* 4 Mar 2024  
The Fields Institute, Geometric Structures Laboratory Seminar
6. *Shifted coisotropic structures for differentiable stacks* 28 Feb 2024  
University of Göttingen, Higher Structures Seminar
7. *Hyperkähler metrics via deformation theory* 10 Mar 2023  
CIRGET, Séminaire de géométrie et topologie
8. *Reduction of Dirac realizations* 4 Jan 2023  
2023 Joint Mathematics Meetings, Boston  
AMS Special Session on Integrable Systems and Symplectic Group Actions
9. *Reduction along a submanifold* 4 Jan 2023  
2023 Joint Mathematics Meetings, Boston  
AMS Special Session on Resolutions of Singularities and  
Cohomology in Geometry and Representation Theory
10. *Twistor constructions of hyperkähler and hypercomplex structures  
near complex submanifolds* 3 Dec 2022  
2022 CMS Winter Meeting, Toronto  
Complex Geometry and Moduli Space
11. *Reduction of Dirac realizations* 17 Nov 2022  
Global Poisson Webinar
12. *Dirac reduction and shifted symplectic geometry* 8 Feb 2022  
SwissMAP Research Station, Les Diablerets  
Differentiable Stacks, Poisson Geometry and related geometric structures
13. *Dirac reduction along a submanifold* 10 Jan 2022  
CIRM, Luminy  
Lie Theory and Poisson Geometry
14. *Symplectic reduction along a submanifold and the Moore-Tachikawa TQFT* 1 May 2021  
AMS Spring Western Sectional Meeting  
Geometric and Categorical Methods in Representation Theory  
American Mathematical Society
15. *Hyperkähler metrics near Lagrangian submanifolds and  
symplectic groupoids* 22 Jan 2021  
Geometry and Topology Seminar  
University of Waterloo

16. *Hyperkähler metrics near Lagrangian submanifolds and symplectic groupoids* 11 Jan 2021  
Differential Geometry Research Seminar  
University of Hamburg
17. *Hyperkähler realizations of holomorphic Poisson surfaces* 11 Dec 2020  
Friday Fish Seminar  
Utrecht University
18. *Mini-course on Symplectic Reduction and Geometric Invariant Theory* 3 Dec 2020  
2020 Canadian Mathematical Society Winter Meeting
19. *Symplectic reduction along a submanifold and the Moore–Tachikawa TQFT* 3 Sep 2020  
Northeastern University  
Geometry, Physics, and Representation Theory Seminar
20. *Hyperkähler structures on holomorphic symplectic groupoids* 7 Jun 2020  
Workshop on Lie theory and integrable systems in symplectic and Poisson geometry
21. *Hyperkähler structures on symplectic realizations of holomorphic Poisson surfaces* 28 May 2020  
School on Geometry and Dynamics of Foliations  
CIRM
22. *Kempf–Ness type theorems and Nahm’s equations* 7 Dec 2019  
2019 Canadian Mathematical Society Winter Meeting  
Algebraic Geometry and Representation Theory  
Toronto, Canada
23. *Stratified hyperkähler spaces, GIT, and Nahm’s equations* 5 Dec 2019  
Boston College  
Geometry and Topology Seminar
24. *Symplectic reduction, GIT quotients, and Nahm’s equations* 21 Nov 2019  
McMaster University  
Geometry and Topology Seminar
25. *Singular hyperkähler reduction and geometric invariant theory* 11 Nov 2019  
University of Toronto  
Symplectic Geometry Seminar
26. *Two lectures on Nahm’s equations* 30–31 Oct 2019  
The Fields Institute  
Geometric Structures Laboratory Seminar
27. *Symplectic reduction, GIT quotients, and Nahm’s equations* 11 Oct 2019  
CIRGET (Centre interuniversitaire de recherches en géométrie et topologie)  
Geometry and Topology Seminar
28. *Singular hyperkähler quotients* 16 May 2019  
University of Duisburg-Essen, Germany  
The Essen Seminar for Algebraic Geometry and Arithmetic
29. *Stratified hyperkähler spaces* 6 Feb 2019  
Centre for Quantum Geometry of Moduli Spaces, Aarhus, Denmark  
QGM seminars

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| 30. | <i>Hyperkähler quotients and geometric invariant theory</i><br>Centre for Quantum Geometry of Moduli Spaces, Aarhus, Denmark<br>Introductory seminars                            | 5 Feb 2019  |
| 31. | <i>Nahm's equations, groupoids, and Higgs bundles</i><br>(Part II of a mini-course on my thesis work)<br>The Fields Institute<br>Geometric Structures Laboratory Seminar         | 25 Jul 2018 |
| 32. | <i>Stratified hyperkähler spaces and Nahm's equations</i><br>(Part I of a mini-course on my thesis work)<br>The Fields Institute<br>Geometric Structures Laboratory Seminar      | 24 Jul 2018 |
| 33. | <i>Stratified hyperkähler spaces</i><br>University of Edinburgh<br>GLEN Algebraic Geometry Seminar   | 15 Jun 2018 |
| 34. | <i>Stratified hyperkähler spaces</i><br>University of Oxford<br>Geometry and Analysis Seminar  | 5 Mar 2018  |
| 35. | <i>Nahm equations, stratified hyperkähler spaces and the Moore–Tachikawa category.</i><br>ICTS, Tata Institute of Fundamental Research, Bangalore, India<br>ICTS Special Seminar | 30 Mar 2017 |
| 36. | <i>Nahm equations and stratified hyperkähler spaces</i><br>Indian Institute of Science, Bangalore, India<br>School and Workshop on Geometry and Physics of Moduli Spaces         | 28 Mar 2017 |