

Maxence Mayrand

Curriculum Vitae | August 2025

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Employment

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

University of Oxford DPhil in Mathematics	2015–2019
Supervisor: Prof. Andrew Dancer	
McGill University BSc Honours Mathematics	2012–2015

Papers

- [1] Maiza, M.M., Mayrand, M., *Lax-Kirchhoff moduli spaces and Hamiltonian 2D TQFT*.
[arXiv:2510.23567](https://arxiv.org/abs/2510.23567)
- [2] Burelle, J-P., Maiza, M.M., Mayrand, M., *Deformations of quasi-Hamiltonian spaces*.
[arXiv:2505.16689](https://arxiv.org/abs/2505.16689)
- [3] Crooks, P., Mayrand, M., *Grothendieck-Springer resolutions and TQFTs*.
[arXiv:2504.10285](https://arxiv.org/abs/2504.10285)
- [4] Crooks, P., Mayrand, M., *The Moore-Tachikawa conjecture via shifted symplectic geometry*.
[arXiv:2409.03532](https://arxiv.org/abs/2409.03532)
- [5] Crooks, P., Mayrand, M., *Scheme-theoretic coisotropic reduction*.
[arXiv:2408.11932](https://arxiv.org/abs/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](https://arxiv.org/abs/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

- 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"> • FRQNT Team Research Project (\$150,000)
With Vestislav Apostолов, Julien Keller, and Frédéric Rochon • NSERC Discovery Grant (\$150,000) • NSERC Discovery Launch Supplement (\$12,500) | 2024–2027

2023–2028

2023–2024 |
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Scholarships and awards

University of Toronto

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

2019–2021

2019–2021 |
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Pacific Institute for the Mathematical Sciences

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

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

2017–2019

2017–2019 |
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- 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

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

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

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