

# Yassine Ait Mohamed

[yassine.ait.mohamed@usherbrooke.ca](mailto:yassine.ait.mohamed@usherbrooke.ca)

[yassineaitmohamed.github.io](https://github.com/yassineaitmohamed)

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| Research interests     | Derivation theory on graded rings, algebraic geometry, Lie groups and Lie algebroids, topological quantum field theories (TQFTs), shifted symplectic geometry, Poisson geometry.   |
| Education              | <b>Ph.D. in Mathematics</b> 2024-present<br>University of Sherbrooke, Sherbrooke, Canada<br><i>Thesis topic: Poisson structures, shifted symplectic geometry, Lie algebroids and groupoids</i><br>Advisor: Prof. <a href="#">Maxence Mayrand</a><br><b>Ph.D. Studies (first year)</b> 2022-2023<br>Sidi Mohamed Ben Abdellah University, Fez, Morocco<br>Program: Noncommutative algebra<br>Advisor: Prof. <a href="#">Lahcen Oukhtite</a><br><b>M.Sc. in Mathematics</b> 2020-2022<br>Sidi Mohamed Ben Abdellah University, Fez, Morocco<br><i>Divisors in Algebraic Geometry, Central Simple Algebras and Severi-Brauer Varieties</i><br>Advisor: Prof. <a href="#">Karim Mounirh</a><br><b>B.Sc. in Mathematics</b> 2016-2020<br>Moulay Ismail University, Meknes, Morocco<br><i>The Spectrum and the Jacobson Radical in a Commutative Ring</i><br>Advisor: Prof. <a href="#">Chahrazade Bakkari</a> |
| Publications           | [1] Y. Ait Mohamed, <i>Degree-Preserving Derivations on Graded Rings and Modules</i> .<br>Submitted.<br>[2] Y. Ait Mohamed, <i>Generalized Homogeneous Derivations on Graded Rings</i> .<br><i>Siberian Mathematical Journal</i> (to appear). <a href="#">arXiv:2412.17187</a><br>[3] Y. Ait Mohamed, <i>On Graded Rings with Homogeneous Derivations</i> .<br><i>Revista de la Unión Matemática Argentina</i> . <a href="#">doi:10.33044/revuma.4934</a>  |
| Notes                  | Y. Ait Mohamed, <i>Note on Central Simple Algebras and the Brauer Group</i> .<br><a href="#">[PDF]</a><br>Y. Ait Mohamed, <i>Note on Sheaf Theory</i> .<br><a href="#">[PDF]</a>   |
| Master's thesis        | <i>Divisors in Algebraic Geometry, Central Simple Algebras and Severi-Brauer Varieties</i> .<br>M.Sc. thesis, Sidi Mohamed Ben Abdellah University (2022).<br><a href="#">[PDF]</a>  |
| Fellowships and awards | ISM Doctoral Scholarship 2024-2026<br>Guaranteed Doctoral Funding, University of Sherbrooke 2024-2028<br>National Doctoral Scholarship, Morocco 2022-2023  |

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|----------------------------|---|---------------|
|                            | National Master's Scholarship, Morocco  | 2020-2022     |
|                            | National Undergraduate Scholarship, Morocco   | 2016-2020     |
| Invited talks and seminars | [1] <i>Poisson Structures on 1-Shifted Coisotropics</i>                                       | November 2025 |
|                            | SAG Seminar, University of Sherbrooke   |               |
|                            | [2] <i>On Bound Quivers</i>   | November 2024 |
|                            | MAT728 - Selected Topics in Algebra, University of Sherbrooke                                 |               |
|                            | [3] <i>Generalized Homogeneous Derivations on Graded Rings</i>                                | July 2023     |
|                            | Seminar on Noncommutative Algebra, Faculty of Science and Technology, Fez                     |               |
|                            | [4] <i>On Graded Rings with Homogeneous Derivations</i>                                       | April 2023    |
|                            | Seminar on Noncommutative Algebra, Faculty of Science and Technology, Fez                     |               |
|                            | [5] <i>On Graded Rings and Derivations</i>  | February 2023 |
|                            | Seminar on Noncommutative Algebra, Faculty of Science and Technology, Fez                     |               |
|                            | [6] <i>On Graded Rings</i>  | January 2023  |
|                            | Seminar on Noncommutative Algebra, Faculty of Science and Technology, Fez                     |               |
|                            | [7] <i>Tensor Algebra and Enveloping Algebra of a Lie Algebra</i>                             | December 2021 |
|                            | Seminar on Geometry and Algebra, Faculty of Science, Dhar El Mahraz                           |               |
|                            | [8] <i>On the Riemann-Roch Theorem</i>  | November 2021 |
|                            | Seminar on Geometry and Algebra, Faculty of Science, Dhar El Mahraz                           |               |
|                            | [9] <i>Action of a Lie Group on a Smooth Manifold</i>   | February 2021 |
|                            | Seminar on Geometry and Algebra, Faculty of Science, Dhar El Mahraz                           |               |
| Professional service       | <i>Seminar Organization</i>   |               |
|                            | Organizer, Junior Seminar in Geometry and Mathematical Physics                                |               |
|                            | 2025-present  |               |
|                            | <i>Research Group</i>   |               |
|                            | Member of <a href="#">SAG -Algebraic and Geometric Structures</a> , University of Sherbrooke. |               |
| Teaching experience        | <b>Teaching Assistant</b> , University of Sherbrooke  | 2024–present  |
|                            | <a href="#">Analysis I (MAT129)</a>   | Winter 2026   |
|                            | <a href="#">Elements of Algebra (MAT141)</a>  | Fall 2025     |
|                            | <a href="#">Applied Linear Algebra in Computer Science (MAT199)</a>                           | Fall 2025     |
|                            | <a href="#">Linear Algebra (MAT253)</a>   | Winter 2025   |
|                            | <a href="#">Differential and Integral Calculus I (MAT194)</a>                                 | Fall 2024     |
|                            | Mathematics Help Center   | Fall 2024     |
|                            | <b>Mathematics Tutor</b>  | 2017-2023     |
|                            | Algebra, real and complex analysis, topology.   |               |
|                            | Private tutoring and teaching centers in Meknes and Fez, Morocco.                             |               |
| Languages                  | Tamazight (native), Arabic (fluent), French (intermediate), English (reading and writing).    |               |