Curriculum Vitæ – Alexis Langlois-Rémillard

Quicklinks: List of publications and list of talks

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Academic positions

Present position

2025/10–2026/09 *FRQNT*[1] *postdoctoral researcher*, Universität Bonn, group leader: Catharina Stroppel.

Past position

2023/10–2025/09, *Hausdorff postdoc*, Hausdorff Center for Mathematics, Universität Bonn, mentor: Eveliina Peltola.

2023/05–09 *Postdoctoral Researcher* ScaDS.AI, Universität Leipzig, mentor: Érika Roldán.

Research visits

2025 Aalto, Espoo, Finland. Visit to Eveliina Peltola and Shinji Koshida 2025/11/02–16

2025 ICERM, Providence, USA. Participation to the thematic semester Categorification and Computation in Algebraic Combinatorics 2025/09/14 – 2025/10/25

2024 Laboratoire de mathématiques de Reims, Reims, France. Visit to Loïc Poulain d'Andecy (Procope-Mobilität agreement) 2024/09–10

2023 Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig, Germany. Visit to the Stochastic Topology and its Applications groups: 2023/06–09,

2023 Kyoto University, Kyoto, Japon. Visit to Julien Gaboriaud: 2023/06/01–21

2022 Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig, Germany. Visit to the group Stochastic Topology and its Applications: 2022/08/22–29

Education

2019–2023, PhD in Mathematics, Universiteit Gent, Belgium.
Thesis title: *Topics in representation theory of the Dunkl total angular momentum algebra*. Advisors: Hendrik De Bie, Roy Oste and Joris Van der Jeugt. Defended 24/04/2023

2017–2019, MSc in Mathematics, Université de Montréal, Québec, Canada.
Master's thesis title: *Sur la structure cellulaire et la théorie de la représentation des algèbres de Temperley–Lieb à couture* (On the cellular structure and the representation theory of the boundary seam Temperley–Lieb algebras).
Supervised by Yvan Saint-Aubin. Defended 13/03/2019

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[1]Fonds de recherche du Québec – Nature et Technologies

2014–2017, BSc in Mathematics Université de Montréal, Québec, Canada.
Bachelor's thesis title: *Algèbres de Temperley–Lieb à frontière soudée* (Boundary seam Temperley–Lieb algebras) supervised by Yvan Saint-Aubin

Funding and scholarships

2024 Procope-Mobilität French embassy in Germany. Funding for a research stay in Reims visiting Loïc Poulain d'Andecy – 2350 EUR

2024–2026 Bourse postdoctorale FRQNT Postdoctoral research grant. Project: *Représentations et calculs diagrammatiques des algèbres liées aux dualités de Howe et de Schur–Weyl* (Representations and diagrammatics of algebras related to Howe and Schur–Weyl dualities). Universität Bonn – 110 000 CAD
(ref: doi:10.69777/326641)

2019–2023 Bourse doctorale FRQNT Doctoral scholarship. Project: *Construction des algèbres de symétrie réalisées par des opérateurs de Dunkl* (Construction of symmetry algebras realised by Dunkl operators). Universiteit Gent – 84 000 CAD
(ref: doi:10.69777/270527)

2019–2023 EOS PhD FWO[2] and FNRS[3] initiative *Excellence of Science*. Doctoral funding. International competition for a full PhD scholarship (4 years) in the project *Partners in Research on Integrable Models and Applications* – est. 130 000 EUR

2017–2019 FRQNT MSc Master scholarship. Project *Représentations des algèbres de Temperley–Lieb à frontière soudée* (Representations of the boundary seam Temperley–Lieb algebras) – 30 000 CAD (accepted only in 2018–2019 due to the NSERC scholarship)

2017–2018 Alexander-Graham-Bell MSc NSERC[4] Master scholarship. Project: *Représentation des algèbres de Temperley–Lieb à frontière soudée* (Representations of the boundary seam Temperley–Lieb algebras) – 17 500 CAD (reference)

2016 NSERC and FRQNT Undergraduate research project. Project: *Les représentations des algèbres de Temperley–Lieb à une frontière* (Representations of one-boundary Temperley–Lieb algebras) supervised by Yvan Saint-Aubin – 7625 CAD

2015 CRSNG Undergraduate research scholarship. Projet: *La mesure de Mahler* (Mahler's measure) supervised by Matilde Lalín – 5625 CAD.

Teaching and supervision

Supervision, mentoring and evaluation of theses

MSc 2025–Current Aikaterini Papageorgiou Kafka, Universität Bonn Title of the project: Diagrammatic calculus for the (Dunkl) Total angular momentum algebra. (Supervisor)

PhD 2024–Current Ferdinand Kafando directed by Ibrahim Nonkané, Université Thomas Sankara. (Mentor, ongoing)

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[2]Fonds Wetenschappelijke Onderzoek, Vlaanderen, Belgium
[3]Fonds National de la Recherche Scientifique, Belgium
[4]National Science and Engeneering Research Council of Canada

BSc 2025 Qamar Radmi, Université Paris-Saclay, Stage hors-murs in Universität Bonn. Title of project: Meanders and Temperley–Lieb algebras. (Internship supervisor)

MSc 2023–2025 Idé Kientega directed by Ibrahim Nonkané, thesis title: *Algèbre des moments cinétiques de Dunkl: générateurs et relations et représentation* Université Thomas Sankara. (Mentor)

BSc 2024 Lukas Nießen, thesis title: *Random walks on Cayley graphs* Universität Bonn. (Cosupervised with Eveliina Peltola)

BSc 2024 Johann Haas-Jobelius, thesis title: *On existence of phase transition for percolation using the Gaussian Free Field* Universität Bonn. (Cosupervised with Eveliina Peltola)

MSc 2022–23 Ferdinand Kafando, directed by Ibrahim Nonkané, thesis title: *Algèbre des moments cinétiques de Dunkl: base de polynomes* Université Thomas Sankara. (Mentor)

MSc 2022–2023 Stijn Dezeure, directed by Alexandra Pižurica. Title: *Moving towards practical quantum decoders for the classical-quantum channel* UGent. (Cosupervised with Srđan Lazendić)

MSc 2021–2022 Pieter-Jan Vandaele, directed by Alexandra Pižurica. Title: *Classical coding approaches to quantum applications* UGent. (Cosupervised with Alí Guzmán Adán and Srđan Lazendić)

Jury MSc External jury member for one Master's thesis at UGent.

Teaching

2025-26 Teacher assistant Course *Introduction à la théorie de la représentation* (Introduction to representation theory), Université de Montréal given online by Yvan Saint-Aubin for the Representation theory network ResAfriRep. Help managing exercise sessions and correcting exams. (in French).

2025 Lecturer UBonn Master's program course *Diagrammatic algebra in representation theory* (selected topics in representation theory) 30 hours, April–July 2025. Course website (in English).

2024 Mini-course TRASP Mini-course on Representation theory, Schur–Weyl duality and Temperley–Lieb algebras given at the African Mathematical School Théorie des représentations et applications en sciences physiques. Ouagadougou, Burkina Faso, 16 hours, June 2024 (in French).

2021 Teaching assistant UGent Course *Wiskunde voor economie 1A* (Mathematics for economy). Helped animate exercise session for 60–80 students (in Dutch).

2016–18 Teaching assistant UdeM Courses *Mathématiques discrètes*, *Analyse 1 and Mathématiques fondamentales* (twice). Animation of exercise sessions for 20–60 students, helped create and correct exams (in French).

Organisation of conferences and seminars

Conference organisation

2025 QTMART 2025 Queer and trans mathematicians in algebra and representation theory. Three-day workshop at University of Bonn on algebra and representation theory, July 2025. Expected attendance 40 people, budget: 15 000 EUR. *Co-organisator.*

2025 CIMPA school Théorie des représentations et applications en physique. Two-week CIMPA school at Université Thomas Sankara, Burkina Faso, in July 2025. Recording of some courses at CIRM in March 2025. Tasks included teaching assistant for the 3 courses projected at the school (24 hours). Attendance 60 people, budget: 34 000 EUR. *External coordinator.*

2023 UGent doctoral school mini-course Mini-course on p-Kazhdan–Lusztig combinatorics given by Chris Bowman and Maud De Visscher for the graduate students of UGent. 10 participants, budget: 4500 EUR. https://sites.google.com/view/kleine-seminar-mini-course. *Co-organisator.*

2019 SAMARI One-day conference on the avenues for work after graduation in mathematics at UdeM. 40 participants, budget: 4000 CAD. *Co-initiator.*

2016–2018 SUMM Seminar in Undergraduate Mathematics in Montreal Yearly three-day conferences for the undergraduate students in mathematics of Montreal. 130 participants, budget: 10 000 CAD. *President of the organising committee in 2016–2017 and normal member in 2018.*

2018 SAPhARI One-day conference on the avenues for work after graduation in mathematics and physics at UdeM. 80 participants, budget: 8000 CAD. *Organisator of the mathematics session.*

2017 CUMC Canadian Undergradute Mathematical CongressYearly one-week conference for mathematics students in Canada. 130 participants, budget: 30 000 CAD. *President of the organising committee.*

Organisation of seminars and sessions

2025 QTMC University of Queensland, Australia. Scientific program member.

2023–2025 Oberseminar Mathematische Physik UBonn. Co-organisator

2019–2023 Kleine seminar UGent, graduate seminar at UGent on various subjects in algebra and representation theory. Subjects covered: *Iwahori–Hecke algebras*; *DAHA*; *categorification*; *category* $\mathcal{O}$; *tensor categories*; *crystal bases*; *Soergel bimodules*. Organisator

2018 Poster session AARMS-STUDC Summer meeting of the Summer meeting of the CMS: 2018 University of New-Brunswick, Frederiction and 2017, University of Waterloo, Waterloo. Co-organisator

2017–2018 SEM Séminaire étudiant en mathématiques, UdeM. Co-organisator

2015–2017 Club mathématique UdeM (Seminar session for undergraduate students). Co-organisator

Community, department and university service

2024–present ResAfriRep Réseau africain en théorie des représentations et applications: external member of the organising committee of a new African network in representation theory. Roles: website management and scientific adviser.

2016–2019 StudC member of the student committee of the Canadian Mathematical Society. Roles: French translation and edition for the publication *Notes from the margin*.

2017–19 AECSMS President (2018–19) treasurer (2017–18) of the graduate student assocation of the students in mathematics and statistics of Université de Montréal

2014–19 UdeM-DMS Departmental assembly of the Mathematics and statistics department of Université de Montréal

Refereeing and reviewing

- Refereed for *Adv. Appl. Clifford Alg.*; *Complex Anal. Oper. Th.*; *Combinatorial Theory*

- Reviewer for *zbMATH Open* (24) and *Mathematical Reviews* (7).

Linguistical competences and programming tools

Languages
- French   Mothertongue (C2)
- English   Bilingual, professionnal practice (C2)
- Dutch   Fluent, professionnal practice (B2 CEFRL 2021/05)
- German   Advanced, daily practice (B2 CEFRL 2025/07)

Programming languages used
SageMath, FORM, GAP, Mathematica, Maple, Python.

Other prizes and distinctions

- Lifeguard   Commonwealth service citation for my volunteer work in between 2013–2017 at the Société de sauvetage du Québec.
- Philosophy   4th place prize (2012–13) and finalist (2014) at the Philosopher contest, an essay competition on philosophy.
- Literature   Finalist short story (top 28 of 512 texts) at the Prix du jeune écrivain de la francophonie 2021.

Alexis Langlois-Rémillard, Ph.D.   Bonn, November 3, 2025
encl. List of publication and list of talks

1 List of publications

The up-to-date list is available at https://alexisl-r.github.io/publications/.

Published articles

A4) Langlois-Rémillard, Alexis; Müßig, Mia; Roldán, Érika. (2025) Computational complexity of chess domination problems. *Res. Math. Sci.* 21, 14 doi:10.1007/s40687-024-00492-5 and arXiv:2211.05651

A3) De Bie, Hendrik; Langlois-Rémillard, Alexis; Oste, Roy; Van der Jeugt, Joris. (2023) Generalised symmetries and bases for Dunkl monogenics. *Rocky Mountain J. Math.* 53 (2) 397–415 arXiv:2203.01204 and doi:10.1216/rmj.2023.53.397

A2) De Bie, Hendrik; Langlois-Rémillard, Alexis; Oste, Roy; Van der Jeugt, Joris (2022) Finite-dimensional representations of the symmetry algebra of the dihedral Dunkl-Dirac operator, *J Algebra* 591: 170-216, doi:10.1016/j.jalgebra.2021.09.025 and arXiv:2010.03381

A1) Langlois-Rémillard, Alexis; Saint-Aubin, Yvan (2020) The representation theory of seam algebras, *SciPost Phys.* 8, 019, 34p. doi:10.21468/SciPostPhys.8.2.019

Published proceedings contributions

P3) Langlois-Rémillard, Alexis (2023) Deforming algebras with anti-involution via twisted associativity. In: Silvestrov, S., Malyarenko, A. (eds) Non-commutative and Non-associative Algebra and Analysis Structures SPAS 2019, Västerås 2019, Springer Proceedings in Mathematics & Statistics, vol 426. Springer Cham. pp. 591–612 doi:10.1007/978-3-031-32009-5_21, arXiv:2106.01855

P2) Langlois-Rémillard, Alexis. (2022) The dihedral Dunkl–Dirac symmetry algebra with negative Clifford signature. In: Dobrev V. (ed) Lie Theory and its Applications in Physics. LT-XIV 2021. Springer Proceedings in Mathematics & Statistics, vol 396. Springer, Singapore. pp. 515–521. doi:10.1007/978-981-19-4751-3_50 and arXiv:2209.06599

P1) Langlois-Rémillard, Alexis; Oste, Roy (2020) An Exceptional Symmetry Algebra for the 3D Dirac–Dunkl Operator. In Dobrev V. (ed) Lie Theory and Its Applications in Physics. LT Varna 2019. Springer Proceedings in Mathematics & Statistics, vol 335, pp 399-405. Springer, Singapore. doi:10.1007/978-981-15-7775-8_30 and arXiv:2009.13904

Preprints

W3) Langlois-Rémillard, Alexis; Raphael, Élise; Roldán, Érika. (2024) Insights from a workshop on gamification of research in mathematics and computer science. arXiv:2411.10207

W2) De Martino, Martino; Langlois-Rémillard, Alexis; Oste, Roy. (2023) The double dihedral Dunkl total angular momentum algebra. arXiv:2308.16366

W1) Langlois-Rémillard, Alexis; Morin-Duchesne, Alexi. (2023) Uncoiled affine Temperley–Lieb algebras and their Wenzl–Jones projectors. arXiv:2302.12782

Outreach articles

O4) Langlois-Rémillard, Alexis; Müßig, Mia N.; Roldán, Érika. Maximale Zäune mit Poly-formen *Mitt Dtsch. Math.-Ver* **33** 3 (2025) pp. 187–199 doi:10.1515/dmvm-2025-0056 (in German).

O3) Langlois-Rémillard, Alexis; Senécal, Charles (2022) Des dames sur d'étranges échiqui-ers. *Accromath*, 17.2, pp. 2-7. Available online at https://accromath.uqam.ca/2022/09/des-dames-sur-detranges-echiquiers/ (in French).

O2) Langlois-Rémillard, Alexis (2022) Huit dames et un échiquier. *Accromath*, 17.1, pp. 8-13. Available online at https://accromath.uqam.ca/2022/02/huit-dames-et-un-echiquier/ (in French).

O1) Boutet, Véronique; Godin, Jonathan; Langlois-Rémillard, Alexis (2017) Excursion typographique : La matrice des fontes, *Accromath*, 12.2, pp. 26-29. Available online at https://accromath.uqam.ca/2017/09/la-matrice-des-fontes/ (in French).

Theses

PhD) Langlois-Rémillard, Alexis. Topics in representation theory of the Dunkl total angu-lar momentum algebra. (2023) PhD thesis at Universiteit Gent. Online version. Su-pervised by Hendrik De Bie, Roy Oste and Joris Van der Jeugt. Defended 24-04-2023.

MSc) Langlois-Rémillard, Alexis. Sur la structure cellulaire et la théorie de la représenta-tion des algèbres de Temperley–Lieb à couture. (2019) MSc thesis at Université de Montréal. doi:1866/22160 . Supervised by Yvan Saint-Aubin, accepted January 2019.

Miscellanea

M5) Langlois-Rémillard, Alexis. *Dualité de Schur–Weyl et algèbres de Temperley–Lieb*. (2024) Course notes (in French) for the course given at ÉMA 2024 Ouagadougou, 23p. Website

M4) Langlois-Rémillard, Alexis. *Queens of the chessboards*. (2022+) Collection of mathe-matical chess problems and English translation of [O2, O3], 27p. Website

M3) Langlois-Rémillard, Alexis (2022) Weavings weights: double dihedral deformation. Poster presented at the PhD Day of the Belgian Mathematical Society, Liège (based on work with M. De Martino and R. Oste)

M2) Langlois-Rémillard, Alexis (2021) Geraldine A. Coon. *Femmes en maths*. Biographical blog post https://femmesenmaths.org/geraldine-coon/

M1) Langlois-Rémillard, Alexis (2016) Le Petit Prince et l'algèbre, Notes from the Margin, Canadian Mathematical Society, Vol XII, p.4. https://issuu.com/cms-studc/docs/margin-fall2016

2   List of talks

Participation to conferences, seminars and schools

Conference as invited speaker

1. 2024/07 **Diagrammatic intuition and Deep Learning in Mathematics**, York. *Quotients of the affine Temperley-Lieb algebras and cobordisms generalisations*

2. 2022/10 **Integrable systems, exactly solvable models and algebras**, Montréal. *Representations and Wenzl–Jones elements of quotients of the affine Temperley–Lieb algebra*

3. 2021/05 **EOS meeting**, UGent, online. *Finite-dimensional representations of the 3D dihedral Dunkl–Dirac symmetry algebra*

Conference participation with contributed talks

1. 2025/04 **Hopf25**, Bruxelles. *A category of stripped cobordisms and generalised Deligne category*

2. 2025/02 **Bonn-Vienna block seminar: Equivariant cohomology, stable envelopes and big algebras**, Bonn, Allemagne. *Endomorphism algebra of $M \otimes (\mathbb{C}^2)^{\otimes m}$*

3. 2023/06 **QTMC**, Queen Mary University London. *Computational complexity of chess domination problems on polycubes*

4. 2022/07 **Group34**, Strasbourg. *Monogenic representations of the algebra of symmetries of the generalised Dirac operator*

5. 2022/05 **Non-commutative algebras, representation theory and special functions**, CRM, Montréal. *On the representation theory of a symmetry algebra associated to a generalised Dirac operator*

6. 2021/06 **Lie Theory and its applications to physics XIV**, online. *Finite-dimensional representations of the 3D dihedral Dunkl–Dirac symmetry algebra*

7. 2020/12 **Réunion d'hiver de la société mathématique du Canada**, Canada, en ligne. *The symmetry algebra of the Dunkl–Dirac operator: the dihedral cases*

8. 2019/10 **International Conference on Stochastic Processes and Algebraic Structures**, Västerås. *Cellular structure of seam algebras and avenues for deformations*

9. 2018/09 **XXX$^{\text{th}}$ Meeting on representation theory of algebras**, Sherbrooke. *Cellular structure of boundary seam Temperley–Lieb algebras*

10. 2018/06 **Réunion d'été de la société mathématique du Canada**, Fredericton. *Bratteli and the morphisms of boundary seam algebras*

11. 2018/05 **XXI$^{\text{e}}$ Colloque ISM**, Sherbrooke. *Bratteli et les morphismes de Temperley–Lieb*

Seminar talks

1. 2025/11 **Aalto Math-Phys seminar**, Aalto University. *Quantum groups at roots of unity with a view towards logCFT*

2. 2025/10 **ICERM Postdoc seminar** ICERM. *Affinization of monoidal categories and more*

3. 2025/10 **Workgroup Prof Andy Sun** MIT. *A short introduction to ideas of representation theory*

4. 2025/04 **Oberseminar Representation Theory** University of Bonn. *Uncoiled algebras and Jones–Wenzl idempotents.*

5. 2024/09 **Séminaire Université de Reims Champagne Ardenne**. *Opérateurs de Dunkl, algèbres de Hecke double affine rationnelles et diagrammatique.*

6. 2024/05 **European Quantum Algebra Lectures**, en ligne. *Quotients of the affine Temperley-Lieb algebras with a view towards generalised Deligne interpolation categories*

7. 2024/05 **Oberseminar Maths-Phys**, Bonn University. *The Dunkl total angular momentum algebra and its representations*

8. 2023/12 **Aalto Mathematical physics seminar**, Aalto University. *Uncoiled affine and periodic Temperley–Lieb algebra, their Wenzl–Jones projectors and their traces*

9. 2023/12 **Uppsala algebra seminar**, Uppsala University *Uncoiled affine and periodic Temperley–Lieb algebra, their Wenzl–Jones projectors and their traces*

10. 2023/11 **Junior algebra seminar**, University of Oxford. *Uncoiled affine and periodic Temperley–Lieb algebra and their Wenzl–Jones projectors*

11. 2023/04 **CAAGT research seminar**, UGent. *Computational complexity of chess domination problems on polycubes*

12. 2023/03 **Clifford research seminar**, UGent. *Uncoiled affine Temperley–Lieb algebras, their Wenzl–Jones projectors and how to construct them*

13. 2022/02 **Clifford research seminar**, UGent, en ligne. *Bases for Dunkl monogenics by generalised symmetries*

14. 2021/04 **Clifford research seminar**, UGent, en ligne. *Generalizing the Deligne category, Khovanov's and Sazdanovic's approach*

15. 2020/08 **Séminaire étudiant en mathématiques**, UdeM. *Cultiver un système de racines dans un champ de dérivées*

16. 2020/03 **Clifford research seminar**, UGent. *The symmetry algebra of the 3D dihedral Dunkl–Dirac equation*

17. 2019/06 **Clifford research seminar**, UGent. *Representation theory and cellular structure of seam algebras*

18. 2018/12 **Séminaire étudiant en mathématique**, UdeM. *Colorier une carte, une approche par dessin*

19. 2018/11 **Seminar: representation theory of algebras**, Université de Sherbrooke. *Idempotence, cellularité et algèbres diagrammatiques*

20. 2017/10 **Mathematical physics seminar**, UdeM. *Roots of unity and the representation theory of boundary seam algebras*

21. 2017/10 **Séminaire étudiant en mathématiques**, UdeM. *Algèbres de Temperley-Lieb, une approche cellulaire*

Workshops

1. 2025/07 **CIMPA School TRAP 2025**, Ouagadougou. *Création d'affiches scientifiques*.

2. 2022/10 **Let's talk about outreach**, Les Diablerets. *Gamification of research* (with É. Roldán-Roa, M. Müßig and P. Voran)

3. 2018/06 **Canadian Mathematical Society Summer Meeting**, Fredericton. *Active teaching workshop* (with M.-A. B. Langlois)

Poster

1. *Weavings weights: double dihedral deformation*, présentée au PhD Day meeting of the Belgian Mathematical Society, Liège 2022 (based on W2)

Participation to conference, congress and school without contribution

1. 2025/09 **ARTA X**, Cologne, Germany

2. 2025/03 **Algebra day**, Caen, France

3. 2025/02 **Artig-5**, Bonn, Germany

4. 2024/07 **Workshop Representations of supergroups**, Bonn, Germany

5. 2023/10 **Panorama of Mathematics**, Bonn, Germany

6. 2023/08 **LMS Bath Summer school and Symposium on Geometric and Categorical Representation theory**, Bath, UK

7. 2023/06 **Algebraic structures and special functions in theoretical physics**. Birthday workshop for Luc Vinet, Ghent, Belgium

8. 2023/06 **Representation theory of Hecke algebras and categorification**, OIST, Okinawa, Japan.

9. 2023/02–03 **Applications of Hecke and related algebras: Representations, Integrability and Physics**, École de physique des Houches, France

10. 2021/10 **Analyse moderne liée aux systèmes de racines avec applications**, CIRM Luminy, France

11. 2020/12 **Workshop on Monoidal and 2-categories in representation theory and categorification**, Bonn, online

12. 2020/06 **Geometric representation theory** Waterloo–Bonn, online

13. 2019/06 **Lie Theory and its applications to physics XIII**, Varna, Bulgaria

Outreach activities

1. 2023-present Fence challenge. Development of an augmented reality application and video game on a pentomino puzzle https://www.erikaroldan.net/fencechallenge

2. 2022-present Domination problem video game. Created with Mia Müßig and Érika Roldán Roa) https://www.erikaroldan.net/queensrooksdomination

3. 2021–present Chess and mathematics. Creation of mathematical problems around chess. Many activities animated and presentation given with material in English, French, Dutch and German.

4. 2016–2018 Institut des sciences mathématiques. Creation of an activity on tatami-perfect tiling in 2016 for the 2016 *MathFest* and co-creation of the activity *Le carréousel du géomètre* for the festival *Eureka!* 2018 at the Science centre of Montréal.

5. 2015–2019 Student edition. From 2015 to 2017 creation and edition of the student journal JÉMUM to showcase student research in mathematics at UdeM and from 2018 to 2019, correction and column writing for the mathematics student journal of UdeM L'Axiomatique

General public presentations

1. 2025/11 **Math circle** Bonn Math Circle *Polyformen en maximale Zaüne*.

2. 2025/04 **Presentation in high school** 90 min, Ghent, IVV Sint-Vincentius, *Maths en échecs*

3. 2024/01 **Club mathématique**, UdeM. *Mon algèbre linéaire ne rentre plus dans mes (co)pantalons*, video.

4. 2024/01 **High school presentation** (10 times 60 min), Saint-Jean-sur-Richelieu, Québec, Canada. *Maths en échecs*.

5. 2023/10 **Schaakweekend Chess and Learn**, Ostende, Belgium. *Schaak en wiskunde*.

6. 2023/09. **Bureau des questions importantes**, Nyon. *La complexité des labyrinthes*.

7. 2023/06 **Lange Nacht der Wissenschaften**, MPI-MiS Leipzig *Mach dein Speil, Games, Cheatcodes und mehr: Schach und Pentominos*.

8. 2022/11 **Imaginary**, Gent, Belgium. *Wiskunde en schaak: Koninginnen en rare borden*.

9. 2022/09 **Club mathématique**, UdeM *La domination, une histoire d'échecs*, video.

10. 2022/04 **Doctoraatstudent aan het woord** 5-minute presentation of my research, UGent

11. 2021/11 **PRIME avond**, UGent. *Koninginnen en (bijzondere) borden*.

12. 2020/09 **Club mathématique**, UdeM, online. *Des pentagones aux heptagones, une infinité de différences*, vidéo.

13. 2018/11 **Club mathématique**, UdeM. *Huit dames pour un échiquier*, video.

14. 2018/07 **Camp mathématique de l'AMQ**, Dawson College, Montréal. *Le carréousel du géomètre*.

15. 2017/11 **Club mathématique**, UdeM. *Excursion typographique : la matrice des fontes*, video.

Those activities used a diversity of tools: exercise sets, 3D-printed components, video games and applications to show mathematics in different settings.