

Alexis  
Langlois-Rémillard  
alexislr@tuta.com  
alexisl-r.github.io  
orcid:0000-0002-5919-8766

**Professionnal address**  
HCM, Universität Bonn  
Endenicher Allee 60  
53115 Bonn  
Germany

# Alexis Langlois-Rémillard

**Research interests** Algebra; representation theory; mathematical physics; diagrammatic algebras and categories; categorification; centraliser algebras; rational Cherednik algebra; combinatorics and algorithmic complexity.

## Professionnal experience

**2023/10–present, Hausdorff Postdoc, HCM, Universität Bonn**  
Mentor: Eveliina Peltola

**2023/05–09, Postdoctoral researcher, ScaDS.AI, Universität Leipzig**  
Mentor: Érika Roldán-Roa

## Education

**2019–2023, Universiteit Gent, Ph.D. in mathematics**  
Supervised by Hendrik De Bie, Roy Oste and Joris Van der Jeugt

**2017–2019, Université de Montréal, M.Sc. in mathematics**  
Supervised by Yvan Saint-Aubin

**2014–2017, Université de Montréal, B.Sc. in pure and applied mathematics**

## Research stays

**Laboratoire mathématiques de Reims**  
Visit to Loïc Poulain d'Andecy: 2024/09–10

**Max-Planck-Institut für Mathematik in den Naturwissenschaften, Leipzig**  
Visits to the Stochastic Topology and its Applications group: 2023/10/16–18, 2023/06–09, 2022/08/22–29

**Kyoto University**  
Visit to Julien Gaboriaud: 2023/06/01–21

## Grants and Scholarships

**2024, Procope-Mobilität grant**  
Travel grant of the French embassy in Germany for a visit to Reims – 2350 Eur

**2024–2026, FRQNT<sup>1</sup> Postdoctoral research scholarship**  
Project: *Représentations et calculs diagrammatiques des algèbres liées aux dualités de Howe et de Schur–Weyl*. Universität Bonn – 110 000 CAD

**2019–2023, FRQNT PhD research scholarship**  
Project: *Construction des algèbres de symétrie réalisées par des opérateurs de Dunkl*. Ghent University – 84 000 CAD

**2019–2023, FWO<sup>2</sup> and FNRS<sup>3</sup> initiative Excellence of Science PhD funding**  
Four-year PhD funding in the project *Partners in Research on Integrable Models and Applications* – est. 130 000 EUR

**2017–2019, FRQNT Master research scholarship**  
Project *Représentation des algèbres de Temperley–Lieb à frontière soudée* – 30 000 CAD (Accepted only for 2018–2019 because of the NSERC scholarship)

**2017–2018, NSERC<sup>4</sup> Canada Graduate Scholarships – Master**  
Alexander-Graham-Bell award Project: *Représentation des algèbres de Temperley–Lieb à frontière soudée* – 17 500 CAD

**Summers 2015–16, NSERC. Undergraduate Student Research Awards**  
2016 with Yvan Saint-Aubin – 7625 CAD (supplemented by a FRQNT scholarship)  
2015 with Matilde Lalín – 5625 CAD.

<sup>1</sup>Fonds de recherche du Québec – Nature et Technologies

<sup>2</sup>Fonds Wettenschappelijke Onderzoek, Vlaanderen, Belgique

<sup>3</sup>Fonds National de la Recherche Scientifique, Belgique

<sup>4</sup>Natural Sciences and Engineering Research Council of Canada

	<b>Summary</b>
p.1	Professional experience
p.1	Education
p.1	Fundings and scholarships
p.2	Teaching and supervision
p.2	Conference and seminar organisation
p.3	Implication
p.4	Publications
p.5	Scientific presentation
p.7	Interest and others

Alexis  
Langlois-Rémillard  
alexislr@tuta.com  
alexisl-r.github.io  
orcid:0000-0002-5919-8766

**Professional address**  
HCM, Universität Bonn  
Endenicher Allee 60  
53115 Bonn  
Germany

## Teaching and supervision

### Supervision, mentoring and evaluation of theses

#### PhD student mentored

Ferdinand Kafando (2024–) directed by Ibrahim Nonkané, Université Thomas Sankara.

#### MSc students mentored

Ide Kientega 2023–24 directed by Ibrahim Nonkané, thesis title: *Algèbre des moments cinétiques de Dunkl: générateurs et relations et représentation* Université Thomas Sankara

Ferdinand Kafando 2022–23, directed by Ibrahim Nonkané, thesis title: *Algèbre des moments cinétiques de Dunkl: base de polynômes* Université Thomas Sankara

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

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

#### BSc students supervised

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

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

#### Jury duty outside supervised students

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

## Teaching

#### Teaching assistant UGent (in Dutch) 2021

Course *Wiskunde voor economie 1A* (Mathematics for economy). Helped animate exercise session for 60–80 students.

#### Teaching assistant UdeM (in French) 2016–18

Courses *Mathématiques discrètes*, *Analyse 1* and *Mathématiques fondamentales* (twice). Animation of exercise sessions for 20–60 students, helped create and correct exams.

## Organisation of conferences and seminars

### Conference organisation

#### 2025 QTMART 2025

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. Expected attendance 60 people, budget: 40 000 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 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*.

#### Summary

- p.1 Professional experience
- p.1 Education
- p.1 Fundings and scholarships
- p.2 Teaching and supervision
- p.2 Conference and seminar organisation
- p.3 Implication
- p.4 Publications
- p.5 Scientific presentation
- p.7 Interest and others

Alexis

Langlois-Rémillard

[alexislr@tuta.com](mailto:alexislr@tuta.com)

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

[orcid:0000-0002-5919-8766](https://orcid.org/0000-0002-5919-8766)

**Professional address**

HCM, Universität Bonn

Endenicher Allee 60

53115 Bonn

Germany

## 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 Canadian Undergraduate Mathematical Congress

Yearly one-week conference for mathematics students in Canada. 130 participants, budget: 30 000 CAD. *President of the organising committee.*

## Seminar organisation

### 2023– Oberseminar Mathematische Physik, UniBonn

Co-organisator of the math-phys seminar in Bonn.

### 2019–2023 Kleine seminar

Organisator of a 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*

### 2017–2018 Poster session AARMS-STUDC

Co-organisator of the student poster sessions to the meetins of the CMS in 2018, University of New-Brunswick, Fredericton and 2017, University of Waterloo, Waterloo.

### 2017–2018 Séminaire étudiant en mathématiques

Co-organisator of the graduate seminar in mathematics at l'UdeM.

### 2015–2017 Club mathématique

Co-organisator for the weekly seminar in mathematics for the students of UdeM.

## Implication

### Refereeing and reviewing

#### Refereeing

Refereed for: *Adv. Appl. Clifford Alg.*; *Complex Anal. Oper. Th.*

#### Scientific review

2020–present zbMATH Open (21 reviews, incl. 1 book) [zbMATH:langlois-remillard.alexis](https://zbMATH.org/authors/langlois-remillard.alexis)

2023–present MathReview (6 reviews) [MR1408521](https://mathreview.org/author/MR1408521)

### Community service

#### 2016–2019 StudC

Student committee of the Canadian Mathematical Society. French translation and edition of French articles of the publication *Notes of the margin*.

#### 2017–2019 AECSMS

Student association of graduate students in mathematics and statistics of UdeM. President (2018-2019) and treasurer (2017-2018).

### Scientific outreach activities

#### 2023–present Fence challenge

I have been involved in the development of an augmented reality app and videogame on the pentomino farm challenge <https://www.erikaroldan.net/fencechallenge>.

#### 2022–present Queen and rook domination video game

Created with Mia Müßig and Érika Roldán-Roa a video game on queen and rook domination on polyominoes <https://www.erikaroldan.net/queensrooksdomination>. Multiple talks and workshops around the material.

#### 2021–present Chess and maths

Creation of mathematical activities around chess puzzles. Multiple talks and creation of material in French, English, Dutch and German.

#### Summary

- p.1 Professional experience
- p.1 Education
- p.1 Fundings and scholarships
- p.2 Teaching and supervision
- p.2 Conference and seminar organisation
- p.3 Implication
- p.4 Publications
- p.5 Scientific presentation
- p.7 Interest and others

Alexis

Langlois-Rémillard

[alexislr@tuta.com](mailto:alexislr@tuta.com)

[alexislr.github.io](https://alexislr.github.io)

[orcid:0000-0002-5919-8766](https://orcid.org/0000-0002-5919-8766)

Professional address

HCM, Universität Bonn

Endenicher Allee 60

53115 Bonn

Germany

## 2016–2018 Institut des sciences mathématiques

Creation of an activity on tatami-perfect pavings in 2016 for the *MathFest* and co-creation of the activity *Le carrérousel du géomètre* for the festival *Eureka!* 2018 at the Science centre of Montréal.

## 2015–2019 Student publishing

From 2015 to 2017 creation and edition of the student journal **JÉMUM** to present student research at UdeM and from 2018 to 2019, corrector and writer for the student journal **L'Axiomatique**

## Publications and preprints

### Theses

#### 2023 PhD Thesis, Universiteit Gent

Topics in representation theory of the Dunkl total angular momentum algebra.

[https://alexislr.github.io/papers/LR\\_PhD\\_Thesis.pdf](https://alexislr.github.io/papers/LR_PhD_Thesis.pdf)

Supervised by Hendrik De Bie, Roy Oste and Joris Van der Jeugt. Defended 24th April 2023.

Jury : Martina Balagović (Newcastle University), Kieran Calvert (University of Manchester), Bart De Bruyn (UGent), Marcelo De Martino (UGent) and Hennie De Schepper (UGent)

#### 2019 Master's Thesis, Université de Montréal

Sur la structure cellulaire et la théorie de la représentation des algèbres de Temperley–Lieb à couture. [doi:1866/22160](https://doi.org/10.1866/22160)

Supervised by Yvan Saint-Aubin. Submitted December 2018, accepted January 2019.

Jury: Abraham Broer (UdeM), Yvan Saint-Aubin (UdeM) and Franco Saliola (Université du Québec à Montréal)

### Published and accepted articles

1. A. Langlois-Rémillard, M. Müßig, É. Roldán Roa. (2022) Computational complexity of chess domination problems. 19p. [arXiv:2211.05651](https://arxiv.org/abs/2211.05651) Accepted in *Res. Math. Sci.* (10/12/2024)
2. H. De Bie, A. Langlois-Rémillard, R. Oste, J. Van der Jeugt. (2023) Generalised symmetries and bases for Dunkl monogenics. *Rocky Mountain J. Math.* 53 (2) 397–415 [doi:10.1216/rmj.2023.53.397](https://doi.org/10.1216/rmj.2023.53.397) [arXiv:2203.01204](https://arxiv.org/abs/2203.01204)
3. H. De Bie, A. Langlois-Rémillard, R. Oste, J. Van der Jeugt. (2022) Finite-dimensional representations of the symmetry algebra of the dihedral Dunkl–Dirac operator. *J. Algebra* 591, pp. 170–216. [doi:10.1016/j.jalgebra.2021.09.025](https://doi.org/10.1016/j.jalgebra.2021.09.025), [arXiv:2010.03381](https://arxiv.org/abs/2010.03381)
4. A. Langlois-Rémillard, Y. Saint-Aubin. (2020) The representation theory of seam algebras. *SciPost Phys.* 8, 019. 34p. [doi:10.21468/SciPostPhys.8.2.019](https://doi.org/10.21468/SciPostPhys.8.2.019), [arXiv:1909.03499](https://arxiv.org/abs/1909.03499)

### Proceedings

1. A. Langlois-Rémillard. (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](https://doi.org/10.1007/978-3-031-32009-5_21), [arXiv:2106.01855](https://arxiv.org/abs/2106.01855)
2. A. Langlois-Rémillard. (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](https://doi.org/10.1007/978-981-19-4751-3_50), [arXiv:2209.06599](https://arxiv.org/abs/2209.06599)
3. A. Langlois-Rémillard, R. Oste. (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. Springer, Singapore. pp 399–405 [doi:10.1007/978-981-15-7775-8\\_30](https://doi.org/10.1007/978-981-15-7775-8_30), [arXiv:2009.13904](https://arxiv.org/abs/2009.13904)

### Submitted articles and preprints

1. A. Langlois-Rémillard, É. Raphael, É. Roldán Roa. *Insights from a workshop on gamification of research in mathematics and computer science*, 16p. [arXiv:2411.10207](https://arxiv.org/abs/2411.10207)
2. M. De Martino, A. Langlois-Rémillard, R. Oste. (2023) The double dihedral Dunkl total angular momentum algebra. 34p. [arXiv:2308.16366](https://arxiv.org/abs/2308.16366)
3. A. Langlois-Rémillard, A. Morin-Duchesne. (2023) Uncoiled affine Temperley–Lieb algebras and their Wenzl–Jones projectors. 55p. [arXiv:2302.12782](https://arxiv.org/abs/2302.12782)

### Summary

- p.1 Professional experience
- p.1 Education
- p.1 Fundings and scholarships
- p.2 Teaching and supervision
- p.2 Conference and seminar organisation
- p.3 Implication
- p.4 Publications
- p.5 Scientific presentation
- p.7 Interest and others

Alexis

Langlois-Rémillard

[alexislr@tuta.com](mailto:alexislr@tuta.com)

[alexisl-r.github.io](https://alexisl-r.github.io)

[orcid:0000-0002-5919-8766](https://orcid.org/0000-0002-5919-8766)

Professional address

HCM, Universität Bonn

Endenicher Allee 60

53115 Bonn

Germany

## Outreach articles

1. A. Langlois-Rémillard, C. Senécal. (2022) Des dames sur d'étranges échiquiers. *Accromath*, 17, 2. pp. 2–7 <https://accromath.uqam.ca/2022/09/des-dames-sur-detranges-echiquiers/>
2. A. Langlois-Rémillard. (2022) Huit dames et un échiquier. *Accromath*, 17, 1. pp. 8–13. <https://accromath.uqam.ca/2022/02/huit-dames-et-un-echiquier/>
3. A. Langlois-Rémillard. (2021) Geraldine A. Coon. *Femmes en maths*. Biographical blog post <https://femmesenmaths.org/geraldine-coon/>
4. V. Boutet, J. Godin, A. Langlois-Rémillard. (2017) Excursion typographique : La matrice des fontes. *Accromath*, 12, pp. 26–29. <https://accromath.uqam.ca/2017/09/la-matrice-des-fontes/>
5. A. Langlois-Rémillard. (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>

## Poster

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

## Scientific presentations

### Invited talks

1. September 2024 **Séminaire Université Reims Champagne-Ardenne**. *Opérateurs de Dunkl, algèbres de Hecke doublement affines rationnelles et diagrammatique*.
2. July 2024 **Diagrammatic intuition and Deep Learning in Mathematics**, York. *Quotients of the affine Temperley-Lieb algebras and cobordisms generalisations*
3. May 2024 **European Quantum Algebra Lectures**, online. *Quotients of the affine Temperley-Lieb algebras with a view towards generalised Deligne interpolation categories*
4. December 2023 **Aalto Mathematical physics seminar**, Aalto University. *Uncoiled affine and periodic Temperley-Lieb algebra, their Wenzl-Jones projectors and their traces*
5. December 2023 **Uppsala algebra seminar**, Uppsala University *Uncoiled affine and periodic Temperley-Lieb algebra, their Wenzl-Jones projectors and their traces*
6. November 2023 **Junior algebra seminar**, University of Oxford. *Uncoiled affine and periodic Temperley-Lieb algebra and their Wenzl-Jones projectors*
7. June 2023 **Kyoto Graduate school in informatics seminar**, Kyoto University. *Computational complexity of domination problems on polycubes: easy as a chess puzzle*
8. April 2023 **Seminar on Quantum groups, Hopf algebras and monoidal categories**, UCLouvain. *Uncoiled affine Temperley-Lieb algebras and their Wenzl-Jones idempotents*
9. February 2023 **Glasgow algebra seminar**, University of Glasgow, Glasgow. *Representations of the Dunkl total angular momentum algebra*
10. January 2023 **Manchester algebra seminar**, University of Manchester, Manchester. *Representations of the Dunkl total angular momentum algebra*
11. October 2022 **Dartmouth combinatorics seminar**, Dartmouth College, Hanover. *Sandwich cellularity and constructing idempotents in quotients of the affine Temperley-Lieb algebras*
12. October 2022 **Integrable systems, exactly solvable models and algebras**, Montréal. *Representations and Wenzl-Jones elements of quotients of the affine Temperley-Lieb algebra*
13. May 2021 **EOS meeting**, UGent, online. *Finite-dimensional representations of the 3D dihedral Dunkl-Dirac symmetry algebra*
14. November 2018 **Seminar: representation theory of algebras**, Université de Sherbrooke. *Idempotence, cellularité et algèbres diagrammatiques*
15. October 2017 **Mathematical physics seminar**, UdeM. *Roots of unity and the representation theory of boundary seam algebras*

### Mini-course

1. May 2024 **Théorie des représentations et applications en sciences physiques**, Université Thomas Sankara, Burkina Faso. Mini-cours intitulé *Dualité de Schur-Weyl et algèbres de Temperley-Lieb* (16 hours).

### Workshops

1. October 2022 **Let's talk about outreach**, Les Diablerets. *Gamification of research* (with É. Roldán-Roa, M. Müßig and P. Voran)
2. June 2018 **Canadian Mathematical Society Summer Meeting**, Fredericton. *Atelier d'enseignement actif* (with M.-A. B. Langlois)

### Summary

- p.1 Professional experience
- p.1 Education
- p.1 Fundings and scholarships
- p.2 Teaching and supervision
- p.2 Conference and seminar organisation
- p.3 Implication
- p.4 Publications
- p.5 Scientific presentation
- p.7 Interest and others



Alexis

Langlois-Rémillard

alexislr@tuta.com

alexisl-r.github.io

orcid:0000-0002-5919-8766

#### Professionnal address

HCM, Universität Bonn

Endenicher Allee 60

53115 Bonn

Germany

## Seminars and talks

1. May 2024 **Oberseminar Maths-Phys**, Bonn University. *The Dunkl total angular momentum algebra and its representations*
2. June 2023 **QTM**, Queen Mary University London. *Computational complexity of chess domination problems on polycubes*
3. April 2023 **CAAGT research seminar**, UGent. *Computational complexity of chess domination problems on polycubes*
4. March 2023 **Clifford research seminar**, UGent. *Uncoiled affine Temperley–Lieb algebras, their Wenzl–Jones projectors and how to construct them*
5. July 2022 **Group34**, Strasbourg. *Monogenic representations of the algebra of symmetries of the generalised Dirac operator*
6. May 2022 **Non-commutative algebras, representation theory and special functions**, CRM, Montréal. *On the representation theory of a symmetry algebra associated to a generalised Dirac operator*
7. February 2022. **Clifford research seminar**, UGent, online. *Bases for Dunkl monogenics by generalised symmetries*
8. June 2021 **Lie Theory and its applications to physics XIV**, online. *Finite-dimensional representations of the 3D dihedral Dunkl–Dirac symmetry algebra*
9. April 2021 **Clifford research seminar**, UGent, online. *Generalizing the Deligne category, Khovanov’s and Sazdanovic’s approach*
10. December 2020 **Réunion d’hiver de la société mathématique du Canada**, Canada, online. *The symmetry algebra of the Dunkl–Dirac operator: the dihedral cases*
11. August 2020 **Séminaire étudiant en mathématiques**, UdeM. *Cultiver un système de racines dans un champ de dérivées*
12. March 2020 **Clifford research seminar**, UGent. *The symmetry algebra of the 3D dihedral Dunkl–Dirac equation*
13. November 2019 **International Conference on Stochastic Processes and Algebraic Structures**, Västerås. *Cellular structure of seam algebras and avenues for deformations*
14. June 2019 **Clifford research seminar**, UGent. *Representation theory and cellular structure of seam algebras*
15. December 2018 **Séminaire étudiant en mathématique**, UdeM. *Colorier une carte, une approche par dessin*
16. September 2018 **XXX<sup>th</sup> Meeting on representation theory of algebras**, Sherbrooke. *Cellular structure of boundary seam Temperley–Lieb algebras*
17. June 2018 **Réunion d’été de la société mathématique du Canada**, Fredericton. *Bratteli and the morphisms of boundary seam algebras*
18. May 2018 **XXI<sup>e</sup> Colloque ISM**, Sherbrooke. *Bratteli et les morphismes de Temperley–Lieb*
19. October 2017 **Séminaire étudiant en mathématiques**, UdeM. *Algèbres de Temperley–Lieb, une approche cellulaire*

## Work groups

1. 2023 **Khovanov arc algebra seminar**, UBonn. 1 presentation.
2. 2019–2023 **Kleine seminar**, UGent. 8 presentations.

## Outreach talks

1. January 2024 **Club mathématique**, UdeM. *Mon algèbre linéaire ne rentre plus dans mes (co)pantalons*, [video](#).
2. January 2024 **High school presentations** (10 times 60 min), Saint-Jean-sur-Richelieu, Québec, Canada. *Maths en échecs*.
3. October 2023 **Schaakweekend Chess and Learn**, Ostende, Belgium. *Schaak en wiskunde*.
4. September 2023. **Bureau des questions importantes**, Nyon. *La complexité des labyrinthes*.
5. June 2023 **Lange Nacht der Wissenschaften**, MPI-MiS Leipzig *Mach dein Spiel, Games, Cheatcodes und mehr: Schach und Pentominos*.
6. November 2022 **Imaginary**, Ghent, Belgium *Wiskunde en schaak: Koninginnen en rare borden*.
7. September 2022 **Club mathématique**, UdeM *La domination, une histoire d’échecs*, [video](#).
8. November 2021 **PRIME avond**, UGent. *Koninginnen en (bijzondere) borden*.
9. September 2020 **Club mathématique**, UdeM, online. *Des pentagones aux heptagones, une infinité de différences*, [video](#).
10. November 2018 **Club mathématique**, UdeM. *Huit dames pour un échiquier*, [video](#).
11. July 2018 **Camp mathématique de l’AMQ**, Dawson College, Montréal. *Le carrérousel du géomètre*.
12. November 2017 **Club mathématique**, UdeM. *Excursion typographique : la matrice des fontes*, [video](#).

### Summary

- p.1 Professional experience
- p.1 Education
- p.1 Fundings and scholarships
- p.2 Teaching and supervision
- p.2 Conference and seminar organisation
- p.3 Implication
- p.4 Publications
- p.5 Scientific presentation
- p.7 Interest and others

Alexis  
**Langlois-Rémillard**  
[alexislr@tuta.com](mailto:alexislr@tuta.com)  
[alexislr.github.io](https://alexislr.github.io)  
[orcid:0000-0002-5919-8766](https://orcid.org/0000-0002-5919-8766)

**Professionnal address**  
 HCM, Universität Bonn  
 Endenicher Allee 60  
 53115 Bonn  
 Germany

## Other participation at workshops and courses (since 2021)

1. 2024-09 **Path integrals and friends**, Helsinki, Finland
2. 2023-08 **LMS Bath Summer school and Symposium on Geometric and Categorical Representation theory**, Bath, England
3. 2023-06 **Algebraic structures and special functions in theoretical physics**. Workshop for Luc Vinet's birthday, Ghent, Belgium
4. 2023-06 **Representation theory of Hecke algebras and categorification**, OIST, Okinawa, Japan.
5. 2023-02-03 **Applications of Hecke and related algebras: Representations, Integrability and Physics**, École de physique des Houches, France
6. 2021-10 **Modern analysis on root systems and applications**, CIRM Luminy, France

## Interests and others

### Languages

- |           |  |
|-----------|--|
| ◦ French  | Mother tongue (C2)                               |
| ◦ English | Bilingual, professional practice (C2)            |
| ◦ Dutch   | Fluent, professional practice (B2 CEFRL 2021-05) |
| ◦ German  | Intermediate, daily practice (B1 CEFRL 2023-07)  |

### Programming languages used

- |            |               |        |
|------------|---------------|--------|
| ◦ Python   | ◦ Mathematica | ◦ GAP  |
| ◦ SageMath | ◦ Maple       | ◦ FORM |

### 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.               |

### Personal interests

Chess, literature, epistolary art, swimming, 3D-printing, jewelry-making and analog photography

Alexis Langlois-Rémillard, Ph.D. Bonn, December 14, 2024

	<b>Summary</b>
p.1	Professional experience
p.1	Education
p.1	Fundings and scholarships
p.2	Teaching and supervision
p.2	Conference and seminar organisation
p.3	Implication
p.4	Publications
p.5	Scientific presentation
p.7	Interest and others