

Robynn Corveleyn

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📍 Brussels, Belgium
◦ Ostend, Belgium
📖 Dutch (native), English (C2), French (C1)



Employment & Education

- 2023-Currently **PhD student in Mathematics**
Université Catholique de Louvain, Belgium
Supervisor: Prof. Timothée Marquis
Research: Kac–Moody groups and algebras, Coxeter groups, buildings, integral group rings, representation theory of locally compact groups
- 2021-2023 **Master of Science in Mathematics**
Vrije Universiteit Brussel, Belgium
With the greatest distinction
Supervisor: Prof. Kenny De Commer
Thesis: Representation theory of classical Type I groups and quantisations: classification of the unitary irreducible representations of $SL(2, \mathbb{R})$, $\text{Aut}(\mathcal{T}_p)$ and $U_q(\mathfrak{sl}(2, \mathbb{R}))$.
- 2019-2021 **Bachelor of Science in Mathematics**
Vrije Universiteit Brussel, Belgium
With great distinction

Publications and Preprints

- (1) Robynn Corveleyn, Geoffrey Janssens & Doryan Temmerman. *Representing in low rank I: Conjugacy, Homological and Topological aspects*. Preprint (58 pages). December 2025. arXiv:2512.22052
- (2) Robynn Corveleyn. *Lie type quotients of the maximal unipotent subgroup of Kac–Moody groups of type $HB_2^{(2)}$* . Preprint (27 pages). August 2025. arXiv:2508.08070

Talks - Invited talks in bold

Conference talks

- (1) “Minimal Kac–Moody groups”, lecture 2 of the minicourse “Introduction to Kac–Moody groups” by T. Marquis, *Summer School Loop Groups and Kac–Moody groups*, Willebadessen, 24 September 2025 (talk jointly given with T. Marquis).

- (2) “Maximal unipotent subgroups of Kac–Moody groups and their finite quotients”, *Buildings 2025, a celebration of Bernhard Mühlherr’s 60th birthday*, Louvain-la-Neuve, 9 September 2025.
- (3) “Bridging the GAP: an algorithm to construct Lie algebra identities from group laws”, *International Conference of Undergraduate Research*, Brussels, 28 September 2021.

Seminar Talks

- (1) “Kac–Moody(–Steinberg) groups and their finite quotients”, *Algebra seminar*, Vrije Universiteit Brussel, 30 May 2025.
- (2) “Kac–Moody(–Steinberg) groups and their finite quotients”, *Seminar of the research group in Algebra*, Universiteit Gent, 22 May 2025.
- (3) “A glimpse into the PI world: crossing the Group-Lie bridge”, *Junior Colloquium of Mathematics*, Université Catholique de Louvain, 20 February 2024.
- (4) “Quantum $\mathfrak{sl}(2, \mathbb{R})$ and its representation theory”, *Seminar of the research group in group theory*, Université Catholique de Louvain, 23 October 2023.

Interdisciplinary and broad-audience outreach

Organisation

- Founder & Principal organiser of the “Maths Project Days”, Université Catholique de Louvain, 3 - 6 September 2025.
The Maths Project Days are an event at UCLouvain in which secondary school students (specifically, girls aged 14-16) work in small groups on a research question during four days. The goal is to help young women develop confidence in their mathematical reasoning, with hopes of encouraging them to follow mathematically oriented studies in the last two years of secondary school, and in higher education.
- Principal organiser of the exhibition “Remember Maryam Mirzakhani” in honour of the international day for women in mathematics, Université Catholique de Louvain, 8 - 30 May 2025.

Talks and volunteering at outreach events

- *Outreach talk*. Dédra-MATH-isons conference, 24 April 2025, UCLouvain, Belgium. *In French*.
Talk for secondary school students (ages 16 - 18) about how and why mathematicians do research
- *Workshop “fold and one cut”*. Pi Day, 12 March 2025, UCLouvain, Belgium. *In French*.
Two hour workshop with secondary school students (ages 16 - 17) on the fold and one cut problem.
- *Pitch battle: Pitch je favoriete wiskundige!* MathFest, 22 September 2024, Bruges, Belgium. *In Dutch*.
Three minute pitch on why Sophie Germain is my favourite mathematician, to an audience consisting of all ages and educational backgrounds.
- *Volunteer MathFest*, 17 September 2023, Bruges, Belgium.
Support hosting a stand by the University of Luxembourg consisting of mathematical games (pattern recognition).

Other/Miscellaneous

- Feature in booklet “Jobs voor wiskundigen” (“Jobs for Mathematicians”), Vrije Universiteit Brussel, Autumn 2024.
- *Volunteer* “Oser Sortir des Cases/Uit de kaders treden”, STEM Steunpunt Brussel, Summer 2024. *In Dutch and in French.*
Development of educational material (shortform videos) on questions relating to gender equality in STEM.

Teaching

- Teaching assistant master course *Théorie de Lie*. Exercise sessions complementary to the lectures, Université Catholique de Louvain, autumn 2024. *In French.*
- Tutor department of Mathematics, Vrije Universiteit Brussel, academic year 2022-2023. Supervision of Q&A sessions for first year students of mathematics and physics. *In Dutch.*
- Tutor study guidance centre, Vrije Universiteit Brussel, autumn 2019 - spring 2023. Private tutoring in mathematics to students in the faculty of sciences and bio-engineering sciences. *In Dutch and in English.*

Conference and event organisation

- Organiser of the Junior Colloquium of Mathematics, Université Catholique de Louvain, autumn 2024 - currently
The Junior Colloquium consists of a monthly meeting of the young researchers of the mathematics department of UCLouvain, in which a (not necessarily local) young researcher in mathematics presents a topic accessible to a broad mathematical audience.
- Local organiser *Buildings 2025, a celebration of Bernhard Mühlherr’s 60th birthday*, Louvain-la-Neuve, Belgium, 8-13 September 2025.
- Organiser of the Junior Teambuilding of the department of Mathematics of UCLouvain. Blankenberge, Belgium, 26-28 May 2025.

Conference participation

- *Summer School Loop Groups and Kac–Moody groups*, Willebadessen, Germany, 22-26 September 2025.
- *Buildings 2025, a celebration of Bernhard Mühlherr’s 60th birthday*, Université Catholique de Louvain, Belgium, 8-12 September 2025.
- *Young Geometric Group Theory XIII*, Københavns Universitet, Denmark, 7-11 April 2025.
- *Climathiques*, Centre International de Rencontres Mathématiques, Marseille, France, 13-17 January 2025.

- *Buildings 2024, conference in honour of the birthday of Linus Kramer*, Universität Münster, Germany, 23-26 September 2024.
- *Summer School Analytic and Arithmetic groups 2024*, Heinrich-Heine Universität Düsseldorf, Germany, 19-23 August 2024.
- *Young Geometric Group Theory XII*, University of Bristol, United Kingdom, 8-12 April 2024.
- *Rigidité en théorie des groupes: aspects géométriques et ergodiques*, Université Paris-Saclay, France, 18-22 March 2024.
- *Colloque pour honorer la mémoire de Jacques Tits*, Collège de France, Paris, France, 11-13 December 2023.
- *Second Antipode Workshop*, Université Libre de Bruxelles, Belgium, 12-13 September 2022.
- *YMC*A*, Universitetet i Oslo, Norway, 8 - 12 August 2022.

References

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