

Bruno Dular

Curriculum Vitae

Maison du Nombre
Avenue de la Fonte 6
4364 Esch-sur-Alzette, Luxembourg
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Date of birth: November 23, 1999

Education

- 2023–present **PhD in Mathematics**, *University of Luxembourg, Luxembourg*
(ongoing) Geometry and Topology group, Advisor : Prof. Jean-Marc Schlenker.
- 2021–2023 **Master in Mathematics**, *Bonn Universität, Germany*
Master's thesis in low-dimensional topology, Advisor : Prof. Peter Teichner.
- 2018–2021 **Bachelor of Science BSc in Mathematics**, *EPFL, Lausanne, Switzerland*
Exchange year (third year of Bachelor, 2020–2021) at *Bonn Universität*.
Bachelor's thesis in algebraic geometry, Advisor : Prof. Daniel Huybrechts

Publications and preprints

Preprints

- 2025 **Bending parameterization of one-sided degenerated Kleinian surface groups**, *submitted* ([arXiv:2504.19891](https://arxiv.org/abs/2504.19891)).
- 2024 **Convex co-compact hyperbolic manifolds are determined by their pleating lamination**, with Jean-Marc Schlenker, *submitted* ([arXiv:2403.10090](https://arxiv.org/abs/2403.10090)).

Publications

- 2026 **Primitive Feynman diagrams and the rational Goussarov-Habiro Lie algebra of string link**, *Algebraic & Geometric Topology*, April 2026, vol. 26 no. 3, 1037–1076
- 2020 **Cycles of Sums of Integers**, *The Fibonacci Quarterly*, May 2020, vol. 58 no. 2, 126–139 ([arXiv:1905.01765](https://arxiv.org/abs/1905.01765)).

Theses

- 2023 **Master thesis** in low-dimensional topology : The Lie algebra of tree diagrams on string links and the rational Goussarov–Habiro conjecture, supervised by Prof. Peter Teichner.
- 2021 **Bachelor thesis** : Finite dimensionality of Chow motives and cohomology of complete intersections, supervised by Prof. Daniel Huybrechts.

Grants and awards

- 2024–2027 **FNR AFR Phd grant**, four-year Phd grant from the Luxembourg National Research Fund.
- 2021–2023 **Deutschlandstipendium scholarship**, merit-based scholarship granted to students in German universities with outstanding academic performance.
- 2022 Award for the **second best average** (among all sections) in the Bachelor at EPFL.
- 2019 Award for the **best average** (among all sections) in the first year of Bachelor at EPFL.

Talks

Talks at workshops/conferences

- November 2025 **Bending parameterisation of hyperbolic structures on three-manifolds**, *Workshop: Exploring Geometry*, Fribourg, Switzerland.

- April 2025 **Rigidity of hyperbolic three-manifolds with respect to their bending lamination**, Workshop: Manifolds and groups in Bologna III, Italy.
 - August 2024 **Thurston's bending conjecture : rigidity via approximation**, Workshop on Convexity and 3d Geometry, Luxembourg.
 - February 2024 **The Goussarov–Habiro Lie algebra of string links** (lightning talk + poster), *Winterbraids*, Montpellier University, France.
- Seminar talks**
- March 2026 **Paramétrisation des trois-variétés hyperboliques par leur lamination de plissage**, *Séminaire de Géométrie, Groupes et Dynamique*, UMPA-ENS Lyon, France.
 - May 2025 **Exploration of three-dimensional hyperbolic geometry**, *PhD seminar*, Luxembourg.
 - October 2024 **Distinguishing knots and links by counting sticks**, *PhD away days*, Liège, Belgium.
 - May 2024 **Convex co-compact hyperbolic three-manifolds are determined by their pleating lamination**, *Geometry and Topology seminar*, Luxembourg.
 - May 2024 **Hyperbolic geometry in two and three dimensions**, PhD seminar day, University of Liège, Belgium.
 - October 2023 **From Feynman diagrams to knot invariants**, *PhD away days*, Leiden University, Netherlands.

Teaching, Outreach and Services

Teaching

- 2024-2026 **Teaching assistant** for Analyse I (WS 2024, WS 2025, WS 2026) at Luxembourg University.
- 2022-2023 **Teaching assistant** for Topology II (for Daniel Kasprowski) and Algebraic Geometry I (for Gebhard Martin) at Bonn University.
- 2019-2020 **Teaching assistant** for Geometry I and Geometry II at EPFL, for Prof. Philippe Michel.

Outreach activities

- July 2025 **Life lines and Patterns workshops**, *Luxembourg Pavillon, Osaka World Expo*, Japan
- 2024-2026 **Les Maths en Scène: atelier "Simplement complexe" (3 participations)**, *Castanet-Tolosan*, France
- 2023-2026 **Participation in diverse science festivals and workshops : Researcher's day, Science Festival, Girl in Mathematics, Game On, Nuit de la Culture**, Luxembourg

Organization and services

- 2024-2025 **Phd representative** for the doctoral students in Mathematics at Luxembourg University.
- 2024-2025 **Organization of the PhD away days and PhD seminar** for the doctoral students in Mathematics at Luxembourg University.

Earlier experiences

- 2014-2017 **Laureate** and two **fourth prizes** at the 39th, 40th and 42nd Belgian Mathematical Olympiad, respectively.
- 2014-2017 **Research Projects** with **MATh.en.JEANS** (high-school-level projects followed by a congress and a short paper) : *Géométrie Robotique* and *Echecs et Math*.