

Edouard Feingesicht

Background

- 2024-2025 **Teaching Assistant in mathematics**, Université de Caen Normandie, (LMNO)
- 2021-2024 **PhD in Mathematics**, Université de Caen Normandie, (LMNO)
Advisor: *Eddy Godelle*
Title: *Representations of structure groups of set-theoretical solutions to the Yang-Baxter equation*
- 2021 **Agrégation de Mathématiques**, Option C (Algebra and formal calculus), (french teaching exam)
- 2018-2020 **Master degree Mathematics and Applications**, Pure Mathematics, Sorbonne Université, Paris (with highest honour)
- 2015-2018 **Double-degree Mathematics-Physics**, Sorbonne Université, Paris (with high honour)
- 2015 **Baccalauréat - General Scientific**, Option: Computer Science, Lycée Notre-Dame de Boulogne, Boulogne-Billancourt

Experiences

- 2020 **Research Internship**, Master's Thesis
Advisors: *Vladimir Dotsenko, Eric Hoffbeck*
Title: *Gröbner basis for algebraic operads*
- 2019 **Research Project**, Sorbonne Université
Advisor: *Benoît Stroh*
Title: *Sheaf theory and Cousin's problems*
- 2018 **Student project**, Sorbonne Université
Advisor: *Arnau Padrol*
Title: *Realization of graph associahedron*
- Summer 2017 **Laboratory internship**, Observatoire de Paris (SYRTE), (10 weeks)
Advisor: *Stéphane Guérandel*
Title: *Computing the evolution of the density matrix for Cesium*

Organization

- Oct. 2024 **Co-organizer**, Conference: From Garside to Yang-Baxter (Caen), with: *E. Godelle, V. Lebed*
- 2023-2024 **Co-organizer**, Young researchers Working Group on Elliptic Curves (Caen), with: *Francesco Iudica, Alexis Lucas*
- 2022-2024 **Co-organizer**, Young researchers seminar of the LMNO (Caen), With: *Francesco Iudica*

Publications

- 2024 **Dehornoy's class and Sylows for set-theoretical solutions of the Yang-Baxter equation**, International Journal of Algebra and Computation, Vol. 34, pp. 147-173

Preprints

- 2025 **How structure groups and monoids grow**, with C. Dietzel & V. Lebed, arXiv:2509.16069.
- 2024 **Hecke algebras for set-theoretical solutions to the Yang-Baxter equation**, arXiv:2411.00695, Accepted under condition of revision by Journal of Algebra and its Applications
- 2024 **On Dehornoy's representation for the Yang-Baxter equation**, with C. Dietzel & S. Properzi, arXiv:2409.10648.

Skills

Languages **French** (*native*), **English** (*Fluent*), **German** (*Basics*)
Programming **GAP**, **SageMath**, **LaTeX**, **Python**, **Lua**, **Java**, **C++**

Talks

- June 2025 **Thompson group F and ordered quandles**, Workshop on Trickle groups, Tours (France)
- June 2025 **Hecke algebras for set-theoretic solutions of the Yang-Baxter equation**, The Yang-Baxter Equation and all that (Będlewo, Poland)
- Apr. 2025 **The Yang-Baxter Equation: analogies with Coxeter groups**, Bielefeld Oberseminar (Germany)
- Mar. 2025 **Algèbre de Hecke pour l'équation de Yang-Baxter**, Colloquium of the French Algebra Network (Clermont-Ferrand, France)
- Feb. 2024 **Hecke algebras for the Yang-Baxter Equation**, Winter Braids XIII (Montpellier, France)
- July 2023 **Germes and Sylows for structure group of solutions to the Yang-Baxter equation**, Young Researchers Algebra Conference 2023 (L'Aquila, Italy)
- June 2023 **Germes and Sylows for structure group of solutions to the Yang-Baxter equation**, Groups, Rings and the Yang-Baxter equation 2023 (Blankenberge, Belgium)
- Feb. 2023 **Germes and Sylows for structure group of solutions to the Yang-Baxter equation**, VUB Algebra Research Group Seminar (Brussels, Belgium)
- Jan 2023 **Germes et Sylows pour les groupes de structure des solutions de l'équation de Yang-Baxter**, LMNO Algebra and Geometry seminar (Caen, France)
- June 2022 **14th days of the Normandie-Mathématiques Federation**, (Diffusion of Mathematics)
- Mar. 2022 **An introduction to Coxeter-like groups**, Algebra Days in Caen 2022: from Yang-Baxter to Garside (Caen, France)
- Dec. 2021 **Groupes de structure des équations de Yang-Baxter**, Young researchers seminar of the LMNO (Caen, France)

Formation

- 2021-2025 **Groups and Braids**, Participation in a Working Group (Caen, France)
- Feb. 2024 **Winter Braids XIII** (Montpellier, France), School on braids and low dimensional topology
- 2023 **Teaching Formation**, ED MIIS (Caen, France)
- Feb. 2023 **Winter Braids XII** (Tours, France), School on braids and low dimensional topology
- Sep. 2022 **Braid meeting 2022: Generalized braid groups** (Amiens, France)
- June 2022 **The algebra of the Yang-Baxter equation** (Będlewo, Poland)
- Dec. 2021 **Winter Braids XI** (Dijon, France), School on braids and low dimensional topology
- Apr. 2021 **Scientific Integrity Formation**, ED MIIS (Caen)

Visits

- Apr. 2025 **Barbara Baumeister**, Bielefeld (Germany), 1 week
- Feb. 2023 **Leandro Vendramin**, Bruxelles (Belgium), 1 week

Teachings

2024-2025 Undergraduate mathematics (Caen):

- Linear Algebra (1st year) (48h)
- Linear Algebra (3rd year) (35h)
- Algorithmics (2nd year) (20h)
- Analysis and numerical applications (2nd year) (50h)
- Geogebra for analysis (2nd year) (39h)

2021-2024 Teaching Assistant: Networks and Telecommunications (1st year):

- Programming fundamentals (30h)
- Mathematics of transmissions (40h)
- Mathematics of numerical systems (98h)
- Mathematical analysis of signals (24h)