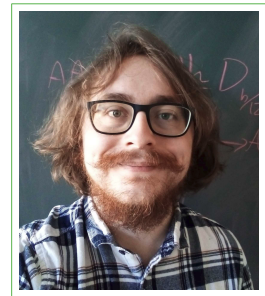# Owen Garnier

Doctor in Mathematics

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Studies

2024 **PhD in mathematics**, *LAMFA*, Amiens.
Titre : Garside groupoids and complex braid groups.
Director : Ivan Marin
Other members of the Jury : Yves Guiraud, Jon McCammond, Adrien Brochier, Cédric Bonnafé, David Chataur, François Digne, Eddy Godelle.

2018–2021 **Masters degree in mathematics (Algebra, number theory and applications)**, *Université de Picardie Jules Verne*, Amiens.
With honors (Mention très bien).
Thesis: Théorie de Garside, applications aux groupes de tresses complexes. Cas de G_{31}. (supervisor: Ivan Marin).

2020 **Agrégation externe de mathématiques**, Rank: 10/387.

2015–2018 **Licence in mathematics**, *Université de Picardie Jules Verne*, Amiens.
With honors (Mention très bien).

Professional experiences

2024– **Temporary research and teaching assistant (ATER)**, *Université de Picardie Jules Verne*, Amiens.

Research papers

2024 **Uniqueness of roots up to conjugacy in circular and hosohedral-type Garside groups.**
Journal of Group Theory 27, 5 (2024), pp. 1091–1128.

2024 **Generalization of the Dehornoy-Lafont order complex to categories. Application to exceptional braid groups.**
Applied Categorical Structures 32, 1 (2024) Paper No. 1, 28 pp.

2023 **Regular theory in complex braid groups.**
Journal of Algebra 620 (2023), pp. 534–557.

Preprints

2024 **Parabolic subgroups of complex braid groups: the remaining case.**

2023 **Springer categories for regular centralizers in well-generated complex braid groups.**

Communications and Talks

Talks in conferences

2025 **Sous-groupes paraboliques des groupes de tresses complexes**, *Journées jeunes chercheurs et chercheuses en topologie*, Amiens.

Groupoïdes de Garside et groupes de tresses complexes, *Colloque tournant du RT algèbre*, Clermont-Ferrand.

2023 **Homology computations for complex braid groups with the Dehornoy-Lafont order complex**, *2023 Meeting of the GDR Homotopy theory and applications*, Lille.

Bessis braid category for the complex braid group B_{31}, *Winterbraids XII*, Tours.

2022 **Regular theory in complex braid groups**, *Journées tresses 2022*, Amiens.

Talks in seminars

2025 **Groupoïdes de Garside paraboliques et applications aux groupes de tresses complexes**, *Séminaire d'algèbre et de géométrie*, Caen

2024 **Des partitions non-croisées à l'étude des sous-groupes paraboliques des groupes de tresses complexes**, *Séminaire SPACE*, Tours

Sous-groupes paraboliques et éléments réguliers des groupes de tresses complexes, *Gaston Darboux seminar of the IMAG*, Montpellier

Homology of categories and the Dehornoy-Lafont order complex, *Seminar of the "Ouragan" team*, Paris

2024 **Description de l'espace des orbites régulières d'un groupe de réflexions complexes**, *Topology seminar of the laboratoire Paul Painlevé*, Lille

2023 **Étude Garside du groupe de tresses complexe** $B(G_{31})$, *GATo Seminar of the LAMFA*, Amiens

Garside study of the complex braid group $B(G_{31})$, *Seminar "Groupes, Représentations et Géométrie" of the IMJ-PRG*, Paris

Homology of a category and the Dehornoy-Lafont order complex, *Paris algebra seminar*, Paris

2022 **Regular theory in complex braid groups**, *Seminario del departamento de Àlgebra*, Sevilla (Spain).

Théorie régulière dans les groupes de tresses complexes, *GATo seminar of the LAMFA*, Amiens.

Conferences

2025 **Journées jeunes chercheurs et chercheuses en topologie**, Amiens, from 09/04 to 11/04.

Colloque tournant du RT algèbre, Clermont-Ferrand, from 03/05 to 03/07.

Winterbraids XIV, Bordeaux, from 02/03 to 02/06.

2023 **2023 Meeting of the GDR Homotopy theory and applications**, Lille, from 10/24 to 10/27.

Various Guises of Reflection Arrangements workshop, Edimbourg (UK), from 03/13 to 03/17.

Spring School on Real, Complex, and Symplectic Reflection Groups, Bochum (Germany), from 03/06 to 03/10.

Winterbraids XII, *Tours*, from 02/21 to 02/24.

2022 **Journées tresses 2022 : Groupes de tresses généralisés**, Amiens, from 08/29 to 09/02.

2021 **Summer school: The dual approach to Coxeter and Artin groups; Garside theory and applications**, Berlin (Germany), from 08/30 to 09/04.

Teaching

2024–2025 **Exercices courses**, *Université de Picardie Jules Verne*, Amiens.
- Calculus (first year) (30h).
- Set theory (second year) (20h).
- Groups, Rings, Fields (third year) (36h).
- Linear algebra 1 (first year) (32h).
- parametrized curves (first year) (36h).
- Complex analysis (third year) (20h).

2023–2024 **Exercices courses**, *Université de Picardie Jules Verne*, Amiens.
- Advanced linear algebra (third year) (20h).
- Complex analysis (third year) (20h).

2022–2023 **Exercices courses**, *Université de Picardie Jules Verne*, Amiens.
- Advanced linear algebra (third year) (20h).
- Algebraic algorithmics (third year) (20h).

2021–2022 **Exercices courses**, *Université de Picardie Jules Verne*, Amiens.
- Calculus (first year) (24h).
- Advanced linear algebra (third year) (20h).
- Complex numbers and geometry (third year) (20h).

Other activities

2023–2024 **Co-organizer of the PhD student seminar of the LAMFA**, Amiens.
Avec Nicolas Beuvin et Michaël Schoonheere.

2022–2023 **Co-organizer of the PhD student seminar of the LAMFA**, Amiens.
Avec Felipe Arbulú et Ismaïl Razack.

2022 **Research stay in Sevilla**, *Universidad de Sevilla*, Sevilla (Spain).
Work with Juan Gonzalez-Meneses (3 weeks).

2022 **Co-organizer of the braid meeting 2022**, Amiens.
With Ivan Marin and Karine Sorlin.