

Merlin Christ

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Research interests

Higher category theory, representation theory, noncommutative algebraic geometry.
Specifically: categorified perverse sheaves, categorifications of cluster algebras, Calabi–Yau categories, relations to Fukaya categories.

Education

- 04/2020–07/2023 **Ph.D. in Mathematics**, *University of Hamburg*
Grade: summa cum laude. Thesis: Perverse schobers and cluster categories. Adviser: Tobias Dyckerhoff.
- 03/2020 **Master of Science in Mathematical Physics**, *University of Hamburg*
Grade: 1.0 with honors.
- 03/2018 **Bachelor of Science in Physics**, *Technical University of Berlin*

Employment

- 10/2025– **University of Bonn**, Bonn Junior Fellow (W2 Professorship for 5 years)
- 10/2023–09/2025 **Institut de Mathématiques de Jussieu - Paris Rive Gauche**, Postdoc (2 years)
As part of the MathInGreaterParis Fellowship Programme, which is a COFUND Marie Skłodowska-Curie Action. With mentorship by Bernhard Keller.
- 04/2020–09/2023 **University of Hamburg**, University research assistant

Publications and Preprints

- [1] M. Christ. Spherical monadic adjunctions of stable infinity categories. *Int. Math. Res. Not. IMRN*, 2023(15):13153–13213, 2022.
- [2] M. Christ. Ginzburg algebras of triangulated surfaces and perverse schobers. *Forum Math. Sigma*, 10:72, 2022. Id/No e8.
- [3] M. Christ. Geometric models for derived categories of Ginzburg algebras of n -angulated surfaces via local-to-global principles. [arXiv:2107.10091](https://arxiv.org/abs/2107.10091), 2021.
- [4] M. Christ. Cluster theory of topological Fukaya categories. [arXiv:2209.06595](https://arxiv.org/abs/2209.06595), 2022.
- [5] M. Christ, T. Dyckerhoff, and T. Walde. Complexes of stable ∞ -categories. [arXiv:2301.02606](https://arxiv.org/abs/2301.02606), 2023.
- [6] M. Christ, F. Haiden, and Y. Qiu. Perverse schobers, stability conditions and quadratic differentials I. [arXiv:2303.18249](https://arxiv.org/abs/2303.18249), 2023.
- [7] M. Christ. Relative Calabi-Yau structures and perverse schobers on surfaces. *To appear in J. Noncommut. Geom.* [arXiv:2311.16597](https://arxiv.org/abs/2311.16597), 2023.

- [8] M. Christ, T. Dyckerhoff, and T. Walde. Lax Additivity. *To appear in Doc. Math.* [arXiv:2402.12251](#), 2024.
- [9] M. Christ, F. Haiden, and Y. Qiu. Perverse schobers, stability conditions and quadratic differentials II: relative graded Brauer graph algebras *To appear in Sel. Math.* [arXiv:2407.00154](#), 2024.
- [10] M. Christ. ∞ -categorical group quotients via skew group algebras [arXiv:2501.13666](#), 2025.
- [11] M. Christ. Induction in perverse schobers and cluster tilting theory [arXiv:2509.01689](#), 2025.
- [12] M. Christ. Cluster theory of topological Fukaya categories. Part II: Higher Teichmüller theory [arXiv:2510.05925](#), 2025.
- [13] M. Christ, E. Lampetti. Lagrangian structures on the derived moduli of constructible sheaves [arXiv:2603.04983](#), 2025.
- [14] M. Christ, R. Casals. Categorical Lusztig cycles and weave schobers To appear. 2026.

Lectures

- 07/2026 **Introduction to perverse schobers (Venice)**
Summer school on Perverse Sheaves and their Categorification in Geometry and Representation Theory. [Link](#).
- 11/2025 **A gentle introduction to sheaves of stable ∞ -categories (Copenhagen)**
At the masterclass on Interactions between homotopy theory and representation theory, 4 lectures. [Link](#).
- 12/2023–
02/2024 **Mini-course on higher category theory and the (additive) categorification of cluster algebras (Paris, hybrid)**
Research level lecture course at the IMJ-PRG, 5 lectures. [Lecture notes](#).
- 02/2022–
04/2022 **A short course on perverse schobers (Beijing, online)**
Research level lecture course at the Yau Mathematical Sciences Center, Tsinghua University, 8 lectures. [Course page](#) and [lecture notes](#).

Conference talks

- 04/2026 **Symplectic topology meets representation theory (Cambridge UK)**
Title: Categorical weave calculus
- 06/2025 **Current trends in Calabi-Yau moduli (Strasbourg)**
Title: Lax additive constructions for Calabi-Yau structures
- 04/2025 **BIRS workshop on Representation Theory, Symplectic Geometry, and Cluster Algebras (Banff)**
Title: Higgs categories from topological Fukaya categories of surfaces
- 09/2024 **Session on Tame categories, geometric models, and homological mirror symmetry (Paderborn)**
Title: 3-Calabi–Yau categories arising from surfaces: gluing and geometric models
- 08/2024 **International Conference on Representations of Algebras, ICRA 21 (Shanghai)**
Title: Cluster categories for higher Teichmüller theory
- 05/2024 **Catégories amassées et symétrie miroir, ANR CHARMS (Strasbourg)**
Title: Recollement des objets amas-basculant sur une surface

- 05/2024 **CHARMS Summer school (Versailles)**
Title: Cluster categories of surfaces and topological Fukaya categories
- 10/2023 **Conférence du GDR Théorie de l'Homotopie et Applications (Lille)**
Title: Complexes of stable infinity-categories
- 06/2023 **Mini-workshop on Symplectic Topology (Imperial College London)**
Title: Complexes of Fukaya-Seidel categories
- 03/2023 **Mini-workshop on higher categorical methods in algebra and geometry (Hamburg)**
Title: Spherical categorical complexes
- 12/2022 **Workshop on spectra, triangles, and higher structures (Bonn)**
Title: Perverse schobers and representation theory

Seminar talks

- 03/2026 **Groupe d'étude Amas, carquois et géométrie (Paris)**
Title: Categorical Luszttig cycles
- 01/2026 **New Directions in Group Theory & Triangulated Categories (online)**
Title: Homotopy group quotients of dg categories and skew group algebras
- 01/2026 **Algebra and Representation Theory Seminar (Köln)**
Title: Rigid extensions for derived preprojective algebras
- 12/2025-
01/2026 **Oberseminar Representation theory (Bonn)**
Title: Perverse schobers for exceptional collections I-III
- 09/2025 **GAT Seminar (Amiens)**
Title: Induction dans les schobers pervers et la théorie de l'amas-basculement
- 09/2025 **Paris Algebra Seminar (Paris)**
Title: Cluster tilting in topological Fukaya categories for higher Teichmüller theory
- 05/2025 **Symplectic seminar (KIAS, Korea Institute For Advanced Study, online)**
Title: Fukaya categories for surface cluster algebras
- 03/2025 **Informal String-Math Seminar (Berkeley)**
Title: Perverse schobers from Lefschetz fibrations
- 11/2024 **Séminaire d'Algèbre et Géométrie (Versailles)**
Title: Cluster categories and Fukaya categories of surfaces
- 11/2024 **Symplectix seminar (Paris)**
Title: From Lefschetz fibrations to sheaves of categories
- 08/2024 **Algebra Seminar (Tsinghua University/YMSC, Beijing)**
Title: Relative Calabi–Yau structures and perverse schobers
- 07/2024 **Mathematics and String theory seminar (Kavli IPMU, Tokyo)**
Title: Perverse schobers on the spectral curve
- 06/2024 **LAGOON Seminar (international, online)**
Title: Relative graded Brauer graph algebras and stability conditions
- 04/2024 **Séminaire d'Homotopie et Géométrie Algébrique (Toulouse)**
Title: Relative Calabi-Yau structures and topological Fukaya categories with coefficients

- 04/2024 **QM Research Seminar (Odense)**
Title: Complexes of stable infinity-categories and perverse schobers
- 03/2024 **Paris Algebra Seminar (Paris)**
Title: Complexes of stable infinity-categories and perverse schobers
- 11/2023 **Paris Algebra Seminar (Paris)**
Title: Relative Calabi-Yau structures and extriangulated cluster categories
- 05/2023 **Oberseminar Algebra (Stuttgart)**
Title: Graded Brauer graph algebras and constructible sheaves of categories
- 04/2023 **Representation theory seminar (Academia Sinica, Taipei, online)**
Title: Complexes of stable infinity-categories
- 10/2022 **Clusters and Braids Seminar (international, online)**
Title: Cluster categories from Fukaya categories
- 01/2022 **Paris Algebra Seminar (Paris)**
Title: Gluing constructions of Ginzburg algebras and cluster categories
- 09/2021 **Geometric Representation Seminar (YMSC, Beijing, online)**
Title: An introduction to perverse schobers on surfaces
- 07/2021 **FD Seminar (international, online)**
Title: Geometric models of Ginzburg algebras via local-to-global principles
- 02/2021 **LAGOON Seminar (international, online)**
Title: A gluing construction for Ginzburg algebras of triangulated surfaces
- 2021 **Seminar of the Center for Mathematical Physics (Hamburg)**
Talk 1: Categories of A- and B-branes in topological string theory
Talk 2: Additive categorification of cluster algebras
- 12/2020 **Groupe d'étude Amas, carquois et géométrie (Paris, online)**
Title: A gluing construction for the relative Ginzburg algebra of a surface