

Zhouhang Mao

Curriculum Vitæ

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Academic Positions

Sep 2023- **Postdoctoral Researcher**, Universiteit van Amsterdam, Amsterdam, Nederland

Mentor: Lenny Taelman

Oct 2021-Aug 2023 **Postdoctoral Researcher**, Institut de Mathématique d'Orsay, Orsay, France

Mentor: Kęstutis Česnavičius

Education

Sep 2018-Oct 2021 **Ph.D. in mathematics**, Sorbonne Université, Paris, France

Thesis: *On derived crystalline cohomology and perfectoid rings as Thom spectra*

Advisor: Matthew Morrow

Sep 2017-Aug 2018 3rd year, École Normale Supérieure, Paris, France

Sep 2016-Aug 2017 **M2 in mathematics**, Université Paris-VII

Mémoire: *Comparisons of different constructions in algebraic K-theory*

Advisor: Matthew Morrow

Sep 2015-Aug 2016 **M1 in mathematics**, École Normale Supérieure, Paris, France

Sep 2012-Aug 2015 **B.Sc. in mathematics**, Fudan University, Shanghai, China

Preprints and publications

Preprint Noncommutative relative de Rham–Witt complex via the norm, [arXiv:2410.05998](https://arxiv.org/abs/2410.05998)

Preprint Equivariant aspects of de-completing cyclic homology, [arXiv:2410.05994](https://arxiv.org/abs/2410.05994)

Preprint Prismatic logarithm and prismatic Hochschild homology via the norm, [arXiv:2409.04400](https://arxiv.org/abs/2409.04400)

To appear Revisiting derived crystalline cohomology, [arXiv:2107.02921](https://arxiv.org/abs/2107.02921), To appear in *Bulletin de la Société Mathématique de France*

Published Perfectoid rings as Thom spectra. *Sel. Math. New Ser.* **29**, 48 (2023). <https://doi.org/10.1007/s00029-023-00851-0>

Conferences and workshops attended (only most recent ones)

Sep 2024 Workshop on “Dualisable Categories & Continuous KK-theory”, MPIM

Aug 2024 Young Topologists Meeting 2024, Münster

Jun 2024 Masterclass: Continuous K-theory, dualizable and rigid categories, University of Copenhagen

May 2024 Real algebraic K-theory and trace methods, Campus Condorcet Paris

Apr 2024 Arithmetic Geometry, IHÉS

Nov 2023 Workshop on p -adic Arithmetic Geometry (Fall), IAS

Sep 2023 Algebraic K-theory and redshift, Mainz

Jul 2023 Algebraic K-theory of spaces, Universität Regensburg

Jul 2023 Recent Advances in Algebraic K-theory, IHÉS

Jul 2023 Homotopy theory, K-theory, and trace methods, Nijmegen

Jun 2023 Arbeitstagung 2023 on Condensed Mathematics, MPIM

Seminar talks

Equivariant aspects of Hochschild homology

21 Nov 2024 Seminar, Universität Regensburg

Revisiting derived crystalline cohomology

09 Nov 2023 Arithmetic and Algebraic Geometry seminar, Universiteit van Amsterdam

10 Feb 2023 Arithmetic Algebraic Geometry, Technical University of Darmstadt

8 Mar 2022 Séminaire d'Homotopie en Géométrie Algébrique, Institut de Mathématiques de Toulouse

9 Nov 2021 Séminaire d'Arithmétique et de Géométrie Algébrique, Université Paris-Saclay

Perfectoid rings as Thom spectra

3 Dec 2020 Seminar of the algebraic topology group, Université Paris Nord

Reviewing activity

Quick Review (1 paper) for Advances in Mathematics, Referee (1 paper) for Compositio Mathematica

Teaching Experience

2024 Spring TA: *Modules and categories*

2021 Spring TD L2 *Intégrale de Lebesgue sur \mathbf{R}^n*

(Exercise sessions: *Lebesgue integral on \mathbf{R}^n*)

2020 Fall TD L2 *Algèbre et Arithmétique*

(Exercise sessions: *Elementary Number Theory and Algebra*)

2020 Spring TD L2 *Algèbre linéaire et bilinéaire IIa*

(Exercise sessions: *Linear and bilinear algebra*)

2019 Fall TD L2 *Séries et Intégrales*

(Exercise sessions: *Series and Integrals*)