

# CURRICULUM VITAE

## FERDINAND WAGNER

Max-Planck-Institut für Mathematik  
Vivatsgasse 7

53111 Bonn, Germany

✉ [ferdinand.wagner@uni-bonn.de](mailto:ferdinand.wagner@uni-bonn.de)

📍 [guests.mpim-bonn.mpg.de/ferdinand](https://guests.mpim-bonn.mpg.de/ferdinand)

I'm a Ph.D. student at the MPIM/University of Bonn under the supervision of Peter Scholze. I'm interested in arithmetic Geometry and homotopy theory, especially in cohomology theories for arithmetic schemes and their construction via localising invariants.

### Education

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2022 – 2025 (expected)	<i>Doctoral studies (Mathematics)</i> at the MPIM/University of Bonn Advisor: Professor Dr. Peter Scholze
2019 – 2022	<i>Master's degree (Mathematics)</i> at the University of Bonn Master's thesis: <i>On <math>q</math>-de Rham Cohomology</i> . Grade: 1.0
2016 – 2019	<i>Bachelor's degree (Mathematics)</i> at the University of Bonn Bachelor's thesis: <i>Serre Duality for Open Varieties</i> . Grade: 1.0

### Preprints<sup>1</sup>

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(in preparation)	<i>Derived <math>q</math>-Hodge Complexes over the Habiro Ring</i>
October 2024	<i>Derived <math>q</math>-Hodge Complexes and refined <math>TC^-</math></i> , joint work with Samuel Meyer, arXiv: 2410.23115 [ <a href="#">math.AT</a> ]
July 2024	<i><math>q</math>-Witt vectors and <math>q</math>-Hodge complexes</i> , arXiv: 2410.23078 [ <a href="#">math.NT</a> ]
August 2017	<i>Totally Odd Depth-Graded Multiple Zeta Values and Period Polynomials</i> , joint work with Charlotte Dietze, Chokri Manai, and Christian Nöbel, arXiv: 1708.07210 [ <a href="#">math.NT</a> ]

### Talks

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November 2024 (expected)	<i>Higher Weight Motivic Cohomology, Algebraic <math>K</math>-theory</i> , ARGOS seminar on Motivic Geometrization of Local Langlands, University of Bonn
November 2024 (expected)	<i>Habiro rings in Arithmetic Geometry</i> , Algebra and Number Theory Seminar, UC Dublin
September 2024	<i>Refined <math>TC^-</math> over <math>ku</math> and derived <math>q</math>-Hodge Complexes</i> , Workshop on Dualisable Categories & Continuous $K$ -Theory, MPIM Bonn
June 2024	<i><math>q</math>-Hodge Cohomology and refined <math>TC^-</math></i> , Séminaire Arithmétique et Géométrie Algébrique, IRMA Strasbourg
June 2024	<i><math>q</math>-Hodge Cohomology and refined <math>TC^-</math></i> , thesis talk in the IMPRS seminar, MPIM Bonn
December 2022	<i>The Moduli Stack of Formal Groups</i> , IMPRS seminar on Formal Groups and Chromatic Homotopy Theory, MPIM Bonn
May 2022	<i>Sato–Tate Distributions for Elliptic Curves</i> , IMPRS seminar on the Sato–Tate conjecture, MPIM Bonn

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<sup>1</sup>I'm also the author of lecture notes (available at [florianadler.github.io/AlgebraBonn/KTheory.pdf](https://florianadler.github.io/AlgebraBonn/KTheory.pdf)) for Fabian Hebestreit's lecture course on Algebraic and Hermitian  $K$ -Theory that have become somewhat popular.

## Conferences and Workshops

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September 2024	<i>Dualisable Categories &amp; Continuous K-Theory</i> , Workshop, MPIM Bonn
July 2024	<i>Arithmetic Geometry</i> , Workshop, MFO Oberwolfach
September 2023	<i>Algebraic K-Theory and Redshift</i> , Fall School, JGU Mainz
March 2023	<i>Motives and Automorphic forms</i> , Conference in honour of Günter Harder's 85 <sup>th</sup> birthday, MPIM Bonn

## Teaching Experience

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September 2023	<i>Lecturer</i> for a week-long course on $\infty$ - <i>Categories in Topology</i> , QED Academy Sonthofen Scope: $\approx$ 39 hours of lectures, from the definition of a quasi-category to the construction of the Adams spectral sequence. Notes ( $\approx$ 70% finished) available at <a href="https://florianadler.github.io/inftyCats/inftyCats.pdf">florianadler.github.io/inftyCats/inftyCats.pdf</a>
2018 – 2022	<i>Tutor</i> for various lecture courses, University of Bonn Tasks: Conducting weekly exercise sessions, grading students' weekly submissions and the final exam

## Volunteer work

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since 2017	<i>Coach</i> for German students at mathematics competitions, including the German IMO team Tasks: Conducting training seminars, preparing $\approx$ 200 pages of training material and exercise problems, correcting students' submissions for exercise problems
since 2017	<i>Grader</i> at German mathematics competitions, including the German National Mathematics Olympiad and the German IMO selection Tasks: Grading students' solutions, preparing exam problems
June 2019	<i>Youth leader</i> at the LSGM maths summer camp Tasks: Supervision, lessons for students of grades 07–12

## Honours and Awards

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January 2020	<i>Bachelor's thesis prize</i> of the Bonn Mathematical Society
2017 – 2019	<i>International Mathematics Competition for University Students</i> , three first prizes, overall 6 <sup>th</sup> place in 2019
2016 – 2021	<i>Scholarship</i> , Studienstiftung des Deutschen Volkes
2014 – 2016	<i>International Mathematics Olympiad</i> , two silver medals and one bronze medal

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