

Klaus Mattis

Curriculum Vitae

Contact

E-Mail klaus.mattis@uni-mainz.de
Website klaus-mattis.com

Research Interests

Motivic Homotopy Theory
Synthetic Deformations
Positive characteristic algebraic geometry

Education

- 2023– **PhD in Mathematics**, *JGU Mainz*, Mainz, Germany
Advisor: Tom Bachmann
- 2022 **MSc in Mathematics (Grade: 1.0)**, *LMU Munich*, Thesis: *Isomotives of Dimension at most 1*
Advisor: Fabien Morel
- 2021 **BSc in Mathematics**, *LMU Munich*, Thesis: *Examples of étale (φ, Γ) -modules*
Advisor: Werner Bley
- 2017–2022 **Studies in Mathematics**, *LMU Munich*
- 2017 **Abitur**, *Gymnasium Oberhaching*

Preprints

- 2025 **Nilpotence of η in étale motivic homotopy theory**, (with Swann Tubach), preprint, arxiv:2511.09476
- 2025 **Monadic resolutions for generalized spaces**, (with Tom Bachmann and Anton Engelmann), preprint, arxiv:2511.07064
- 2025 **The derived ∞ -category of Frobenius Modules**, (with Timo Weiβ), preprint, arxiv:2410.17102
- 2025 **Unstable étale motives**, preprint, submitted, arXiv:2507.20320
- 2024 **The derived ∞ -category of Cartier Modules**, (with Timo Weiβ), preprint, submitted, arXiv:2410.1710
- 2024 **Unstable arithmetic fracture squares in ∞ -topoi**, preprint, submitted, arXiv:2404.18618
- 2024 **The pro-Nisnevich topology**, preprint, arXiv:2404.17314
- 2024 **Unstable p -completion in motivic homotopy theory**, preprint, submitted, arXiv:2401.17848

Talks

- July 2025 *Étale rigidity for motivic spaces*, Motives and arithmetic geometry, Darmstadt
June 2025 *Canonical resolutions for motivic spaces*, Young topologists meeting, Stockholm
April 2025 *Étale rigidity for motivic spaces*, École normal supérieur, Lyon
April 2025 *Étale rigidity for motivic spaces*, University of Toronto
June 2024 *Proof of the Hopkins-Morel-Hoyois theorem*, International Workshop on Algebraic Topology, Shanghai
February 2024 *Unstable p-completion in motivic homotopy theory*, YoungHom Seminar, online

Academic Service

- October 2025 Organizer, *GAUS Workshop on “Motives and Higher Categories”*, JGU Mainz
January 2025 Organizer, *GAUS Junior AG on “Maps between spherical group rings”*, JGU Mainz
March 2024 Co-organizer, *Winter school on unstable motivic homotopy theory*, JGU Mainz

Teaching Experience

- WT 25/26 **Organizer**, *PhD-Seminar*, JGU Mainz
WT 25/25 **Teaching Assistant**, *Math for Computer Science 1*, JGU Mainz
ST 25 **Organizer**, *PhD-Seminar*, JGU Mainz
ST 25 **Organizer**, *Seminar on motivic spectra*, JGU Mainz
WT 24/25 **Teaching Assistant**, *Math for Computer Science 1*, JGU Mainz
WT 24/25 **Organizer**, *PhD-Seminar*, JGU Mainz
ST 24 **Organizer**, *PhD-Seminar*, JGU Mainz
ST 24 **Lecturer (1/3 of the course)**, *Algebraic Topology I*, JGU Mainz
WT 23/24 **Teaching Assistant**, *Math for Computer Science 2b*, JGU Mainz
WT 23/24 **Organizer**, *PhD-Seminar*, JGU Mainz
ST 23 **Teaching Assistant**, *Elementary Differential Geometry*, JGU Mainz
ST 21 **Tutor**, *Commutative Algebra*, LMU Munich
WT 20/21 **Tutor**, *Algebra*, LMU Munich
ST 20 **Organizer**, *Reading Class on Category Theory*, LMU Munich
ST 20 **Tutor**, *Linear Algebra 2*, LMU Munich
WT 19/20 **Tutor**, *Linear Algebra 1*, LMU Munich