# JULIE BANNWART

## PERSONAL INFORMATION

Email address: bannwart.julie[at]gmail.com
Website: www.juliebannwart.com
University address:
Institut für Mathematik (FB 08)
Johannes Gutenberg-Universität
Staudingerweg 9
55128 Mainz, Germany

Date of birth: 12th July 2004
Nationality: French
Pronouns: she/her

## EDUCATION

| | |
|---|---|
| 04/2025 – | **PhD student in Mathematics**, Johannes Gutenberg-Universität (JGU), Mainz, Germany. Advisor: Prof. Tom Bachmann. |
| 09/2024 – 03/2025 | Semester in JGU, Mainz, Germany, to write my **Master's thesis**: *On the real realization of the motivic spectrum* ko. Advisor: Prof. Tom Bachmann. |
| 09/2023 – 03/2025 | **MSc in Mathematics**, Ecole Polytechnique Fédérale de Lausanne (EPFL), Switzerland. |
| 07/2023 – 09/2023 | **Summer internship** in the EPFL Laboratory for Topology and Neurosciences ("Summer in the lab" program). Work on $N_\infty$-operads and model structures on poset categories. |
| 09/2020 – 07/2023 | **BSc in Mathematics**, EPFL, Switzerland. Thesis: *Model categories and homotopy: the example of topological spaces and simplicial sets*. Advisor: Prof. Jérôme Scherer. |
| 07/2020 | **Baccalauréat**, in Forbach, France. |

## RESEARCH INTERESTS

- Unstable and stable motivic homotopy theory.
- Variants of algebraic K-theory.
- Higher algebra in general.

## PREPRINTS

- *The real Betti realization of motivic Thom spectra and of very effective Hermitian K-theory,* https://www.arxiv.org/abs/2505.07297, May 2025.

## PUBLICATIONS

- *Realization of saturated transfer systems on cyclic groups of order $p^nq^m$ by linear isometries $N_\infty$-operads*, J. Homotopy Relat. Struct, https://doi.org/10.1007/s40062-025-00377-6, July 2025.
- *When equivariant homotopy theory meets combinatorics* (survey article), Pittsburgh Interdiscip. Math. Rev., vol. 3, pp. 1–27, https://doi.org/10.5195/pimr.2025.56, July 2025.

## TALKS

| | |
|---|---|
| 07/2026 | Young Topologists Meeting 2026, Copenhagen. "Unstable $\eta$-complete and $\eta$-periodic motivic homotopy theory » |
| 06/2025 | Young Topologists Meeting 2025, Stockholm. "The real Betti realization of very effective Hermitian K-theory, and of motivic Thom spectra" |
| 06/2025 | AG Seminar homotopy theory, Regensburg. "The real Betti realization of motivic Thom spectra and of very effective Hermitian K-theory" |

## TEACHING EXPERIENCE

| | |
|---|---|
| 2026 | Exercise sessions for Lineare Algebra 2, JGU. |
| 2026 | Exercise sessions for Topology 0, JGU. |
| 2025 | Exercise sessions for Algebraic topology II and Foundations of motivic homotopy theory, JGU. |
| 2024 | Student assistant for Rings & Fields and Group & Category theory, EPFL. |
| 2023 | Student assistant for Linear algebra, EPFL. |
| 2022 | Student assistant for Linear algebra, EPFL. |
| 2018-19 | Tutoring at high school. |