Yicheng Zhou

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Research Interests

Arithmetic geometry and p-adic geometry
p-adic Hodge theory, rigid-analytic motives, K-theory, and Galois representations.

Education

2021 – now	**PhD candidate**, IMJ-PRG, Sorbonne Université, France.
	Thesis: "On Hodge theory of p-adic symmetric spaces", advised by Wiesława Nizioł.
2020 – 2021	**M2 Analyse**, **Arithmétique**, **Géométrie**, Institut Polytechnique de Paris, joint program with Université de Paris-Saclay.
2017 – 2021	**Cycle d'ingénieur**, École Polytechnique, France.
2014 – 2017	**B.Sc. in Mathematics**, Fudan University, China.
2013 – 2014	**Natural Sciences Experimental Class**, Fudan University, China.

Writings

Preprints:

2024	**Syntomic cohomology and p-adic regulators for proper p-adic rigid analytic varieties**, *in preparation*.
2024	**Profiniteness of mod p étale cohomology for partially proper curves**, *preprint*.

Notes:

2024	**Altered uniformisation of log-rigid spaces**, with application to ongoing work on cohomology of log-rigid spaces.

Talks on others' works

01/2024	**Descent of pseudocoherent and perfect complexes on analytic adic spaces**, d'après Andreychev, *Preprint Seminar*, Jussieu.
01/2024	**Dualité de Poincaré abstraite**, *Study group on six-functor formalisms*, Jussieu.
10/2022	**Duality theories for p-primary étale cohomology**, d'après Kato-Suzuki, *Preprint Seminar*, Jussieu.
04/2022	**K-théorie de Milnor pour les anneaux p-adiques**, d'après Lüders-Morrow, *Preprint Seminar*, Jussieu.
05/2021	**Solid abelian groups II**, *Study group on condensed mathematics*, Jussieu, Paris.

Attended conferences and workshops

2024 **Analytic de Rham stacks**, Warsaw, Poland.

2024 **Oberwolfach Seminar: Reduction of Arithmetic Varieties**, Oberwolfach, Germany.

2024 **Algebraic K-Theory and Arithmetic**, Będlewo, Poland.

2024 **Riemann–Hilbert correspondence — classical and p-adic**, Padova, Italy.

2022 **Cohomology of symmetric spaces**, ENS-Lyon, France.

2022 **Franco-Asian Summer School on Arithmetic Geometry**, CIRM, France.

Teaching and organization

2022 – now **Co-organizer**, *Séminaire Mathjeunes*, Jussieu, Paris.

04/2022 **Volunteer assistant**, *Sorbonne Université et Association Science Ouverte*, High school student internship on "La cryptologie : codes secrets et cybersécurité".

2021 – 2024 **Teaching assistant**, *Sorbonne Université*.
- LU2MA260 Séries et séries de fonctions, année 2023–2024.
- LU3MA261 Calcul différentiel et optimisation, année 2022–2023.
- LU2MA260 Séries et séries de fonctions, année 2022-2023.
- LU3MA261 Calcul différentiel et optimisation, année 2021–2022.
- LU1MA002 Mathématiques pour les études scientifiques II, année 2021–2022.

Languages

- Chinese (native), English and French (professional fluency), German and Italian (basic).
- Volunteer French teacher for Chinese immigrants at Notre-Dame de Chine, Paris, from 2021 to 2023.