

# KAIXING CAO

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Dipartimento di Matematica “Federigo Enriques”

Via Cesare Saldini 50, 20133

Milan - Italy

## Personal Information

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Born in December 1996 in Leshan, China.

## Education

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- **University of Milan**

*Ph.D. in Mathematics (Supervisor: Prof. Alberto Vezzani)*

Milan, Italy

*Sep 2022 - Present*

- **Academy of Mathematics and System Science, Chinese Academy of Sciences**

*M.Sc. in Mathematics (Supervisor: Prof. Xu Shen)*

Beijing, China

*Sep 2019 - Jun 2022*

- **Hohai University**

*B.Sc. in Mathematics*

Nanjing, China

*Sep 2015 - Jun 2019*

## Research Interest

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Arithmetic Geometry,  $p$ -adic Geometry,  $p$ -adic Hodge Theory, Rigid Analytic Motive

## Preprints

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- [1] **Kaixing Cao**. “A Weight Structure on Rigid Analytic Motives over A Field”. Preprint, to appear on arXiv. 2025.
- [2] **Kaixing Cao**. “Comparison of Hyodo-Kato and de Rham Fargues-Fontaine Cohomologies”. Preprint, to appear on arXiv. 2025.

## Participation in conferences

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- **Arakelov Geometry and Condensed Mathematics** [🌐]

*Institut de recherche mathématique avancée*

Strasbourg, France

*May 2025*

- **Algebraic geometry: a motivic view** [🌐]

*Eidgenössische Technische Hochschule Zürich, ETH Zurich*

Zurich, Switzerland

*January 2025*

- **Arithmetica Transalpina** [🌐]

*University of Milan*

Milan, Italy

*November 2024*

- **Nearby Cycles and Derived Geometry** [🌐]

*University of Regensburg*

Regensburg, Germany

*February and March 2024*

- **Arithmetica Transalpina** [🌐]

*University of Padova*

Padova, Italy

*November 2023*

- **Arbeitstagung 2023 on Condensed Mathematics** [🌐]

*Max Planck Institute for Mathematics, MPIM*

Bonn, Germany

*June 2023*

- **Research School on Condensed Mathematics** [🌐]

*Centre International de Rencontres Mathématiques, CIRM*

Luminy, France

*March 2023*

- **PrisMiPd Prismatic Workshop** [🌐]

*First Meeting in Milan and Second Meeting in Padova*

Milan - Padova, Italy

*January and February 2023*

- **Mini-Course:  $p$ -adic Hodge Theory and Prismatic Cohomology** [🌐]  
*Beijing International Center for Mathematical Research, BICMR*  
Beijing, China  
November - December, 2021
- **Mini-Course: Perfectoid Spaces and  $p$ -adic Hodge Theory** [🌐]  
*Beijing International Center for Mathematical Research, BICMR*  
Beijing, China  
September - October, 2021
- **From Modular Forms to Shimura Varieties: an Introduction** [🌐]  
*Beijing International Center for Mathematical Research, BICMR*  
Beijing, China  
July, 2021

## Talks

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- **Reading Seminar on “(Light) Condensed Mathematics”**  
*Analytic Rings Associated to Huber Pairs*  
Milan, Italy  
February, 2025
- **SeMIVA on “Spectral Algebraic Geometry”** [🌐]  
*Tannaka Duality for Truncated Cases*  
Milan, Italy  
July, 2024
- **PhD<sup>2</sup>ays 2024** [🌐]  
*An Introduction to Non-Archimedean Geometry*  
Milan, Italy  
March, 2024

## Honors and Awards

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- **Doctoral Scholarship**  
*University of Milan*  
Oct 2022 - Sep 2025
- **Merit Student**  
*University of Chinese Academy of Science*  
Jun 2021
- **Chinese Mathematics Competition**  
*CMC 1st Prize of Jiang Su Province*  
Nov 2017
- **China Undergraduate Mathematical Contest in Modeling**  
*CUMCM 1st Prize of Jiang Su Province*  
Nov 2017