

# Keyao PENG

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Doctorant

*Epiphany is not about solving a complex puzzle, but  
something that was too simple to see.*

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## Education

- 2020– **Ph.D.**, *Institut Fourier, Université Grenoble Alpes*, Grenoble, France.  
Algebraic geometry, with advisor *Jean Fasel*
- 2019–2020 **Master**, *Institut Fourier, Université Grenoble Alpes*, Grenoble, France.  
Mathématiques fondamentales
- 2015–2019 **Bachelor**, *Taishan College, Shandong University*, Jinan, China.  
Majored in mathematics

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## Academic Activities

- Aug 2022 Motivic Geometry Conference, Oslo
- Jul 2022 Summer School on the Langlands program, IHES
- Jun 2022 Harnessing motivic invariants, Essen
- Jun 2022 Conférence A Toulouse pour Simpson, Toulouse
- Feb 2022 Logic and higher structures, CIRM
- Jan 2022 Linear Logic Winter School, CIRM
- Sep 2021 Unifying Themes in Geometry, Lake Como
- Sep 2021 The Six-Functor Formalism and Motivic Homotopy Theory, Milano
- Sep 2021 Summer School on Derived and Triangulated Categories, Wuppertal
- July 2021 Summer School "Illustrating Mathematics", PCMI
- July 2021 Summer School "Motivic Homotopy", PCMI
- July, Sep 2021 Series Workshops "Expanding Horizons of Inter-universal Teichmüller Theory", RIMS
- June 2021 Topos online, IHES
- June 2021 Tangent Categories and their Applications, BIRS
- 2020–2021 Working group on stratified homotopy theory, IAS
- July 2020 Summer School "Motivic, Equivariant and Non-commutative Homotopy Theory", IHES

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## Skill

### Language

Chinese Mother tongue

French B1

English C1

## Computer

Language   Typescript, C#, Haskell, Purescript,  
                  Lean  
Animation   Blender

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## Interest

Synthetic geometry   Study geometry without using analysis, including algebraic geometry, arithmetic geometry, algebraic analysis and more  
Homotopy   The geometry of "path", like A1 homotopy theory, homotopy type theory  
          Topos   Sketch an elephant  
Higher math   Higher means add homotopy to everything, like set, algebra, category, topos, etc.

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## Paper and Thesis

Keyao Peng. Sheaves and differential equations: An introduction to algebraic analysis, 2019.

Keyao Peng. Milnor-witt motivic cohomology of complements of hyperplane arrangements, 2020.