

Ruichen XU (徐睿晨)

Ph.D Student, Chinese Academy of Sciences

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🔗 <https://xuruichen98.github.io/>

Citizenship: People's Republic of China

Current Place of Residence: Besançon, France

Education

- **Chinese Academy of Sciences** *Ph.D student in mathematics* Sept 2021 - July 2026 (*Expected*)
 - Doctoral Advisor: Xin WAN.
 - Research Interest: Number theory, especially Iwasawa theory. In particular:
 - * Automorphic methods in Iwasawa theory
 - * Iwasawa theory in families
 - * Arithmetic applications of Iwasawa theory, such as the arithmetic of elliptic curves in relation to the Birch and Swinnerton-Dyer conjecture, and its extensions to Galois representations, including the Bloch-Kato conjecture.
- **Beihang University** *Bachelor of Science in mathematics* Sept 2017 - July 2021
 - Undergraduate Advisor: Peng GAO and Shijin ZHANG (thesis advisor).
 - Undergraduate Thesis: *The Proof of Fermat's Last Theorem: Wiles' Proof and Beyond*

Publications and Preprints

- Ruichen Xu. *The Gan-Gross-Prasad period of Klingen Eisenstein families over unitary groups*, preprint (2024). arXiv: [2410.13132](https://arxiv.org/abs/2410.13132).

Visiting Experiences

- **L'Université de Franche-Comté** Dec 2024 - July 2025 (*Expected*)
 - Host Advisor: Olivier FOUQUET.
 - Host Institute: Laboratoire de Mathématiques de Besançon (LmB).
 - Supported by the program “2024 International Research Collaboration Program for Postgraduate Students” of Chinese Academy of Sciences, together with LmB.
- **Peking University** *The 13th Enhanced Program for Graduate Study* Mar 2021 - July 2021
- **Peking University** *The 12th Enhanced Program for Graduate Study (Online)* Mar 2020 - July 2020

Scholarships

- **Professor Hua Loo-Keng Scholarship** *Chinese Academy of Sciences* 2022, 2023
for excellence in PhD qualifying exams and research.
- **Professor Hua Loo-Keng Scholarship** *Chinese Academy of Sciences* 2019, 2020, 2021
for excellence in undergraduate mathematical coursework and contests.

Teaching Experiences

- **Advanced Abstract Algebra** *Teaching Assistant* Fall 2020
Taught by Shaoshi CHEN (Chinese Academy of Sciences) at Beihang University.
- **Complex Analysis** *Teaching Assistant (Online)* Spring 2020
Taught by Shengjian WU (Peking University) at Beihang University.

Conferences Attended

- **Young researchers in Galois Representations and related topics** *Genova, Italy* Jan 2025
At the *Università di Genova*.
- **Workshop on p -adic Geometry** *Singapore* Nov 2024
At the *National University of Singapore*.
- **BSD Conjecture and Goldfeld Conjecture** *Kunming, Yunnan, China* Oct 2024
At *Tianyuan Mathematics Research Center*.
- **Development of Iwasawa Theory** *Yokohama, Kanagawa, Japan* Jul 2024
A conference in honor of the 60th birthday of Masato Kurihara. At *Keio University*.
- **2024 Jinling Conference of Number Theory** *Nanjing, Jiangsu, China* Apr 2024
At *Nanjing University*.
- **Special Values of L -functions** *Sanya, Hainan, China* Jan 2024
At *Tsinghua Sanya International Mathematics Forum*.
- **The 3rd Cross Strait Workshop on Arithmetic Geometry** *Hefei, Anhui, China* Aug 2023
At the *University of Science and Technology of China*.
- **Workshop on Arithmetic and Topology** *Shenzhen, Guangdong, China* Aug 2023
At the *Southern University of Science and Technology*.
- **Iwasawa 2023: in memory of John Coates** *Cambridge, the United Kingdom* July 2023
At the *University of Cambridge*.
- **Satellite Conference in Number Theory of ICBS** *Beijing, China* July 2023
At *Morningside Center of Mathematics, Chinese Academy of Sciences*.
- **2023 Jinling Conference of Number Theory** *Nanjing, Jiangsu, China* June 2023
At *Nanjing University*.

Summer Schools Attended

- **Summer school on Galois representations and Reciprocity** *Hanoi, Vietnam* July 2024
At *Vietnam Institute for Advanced Study in Mathematics*.
- **2021 Summer School on Number Theory** *Xi'an, Shaanxi, China* July 2021
At *Xi'an Jiaotong University*.
- **Theta Correspondence and Its Arithmetic Applications** *Suzhou, Jiangsu, China* July 2021
At *Soochow University*.
- **Short Courses on Number Theory** *Xiamen, Fujian, China (Online)* July 2020
At *Xiamen University*.
- **2020 SCMS Algebraic Geometry Summer School** *Shanghai, China (Online)* July 2020
At *Shanghai Center of Mathematical Sciences, Fudan University*.
- **"The Road to Mathematics" Int'l Summer School** *Harbin, Heilongjiang, China* July 2019
At *Harbin Institute of Technology*.

Languages

- **Chinese:** Native
- **English:** Proficient
- **French:** Beginner