Pu Fan

fanpu1231@outlook.com · 1800010614@pku.edu.cn · 2220502176@cnu.edu.cn

Personal website: https://phanpu.github.io/

Research Interests & Current Interests

Arithmetic geometry, mainly in p-adic Hodge theory and Abelian varieties.

rigid analytic spaces/ adic spaces/ perfectoid spaces/...,

p-adic Hodge theory over rigid analytic spaces (Sch 13),

relative p-adic Hodge theory (Kedlaya-Liu I,II),

p-adic Riemann-Hilbert correspondence (Liu-Zhu),

integral p-adic Hodge theory (Kisin, Sch-Bhatt,...),

My master thesis focuses on the new proof of Mordell conjecture proposed by Lawrence and Venkatesh.

Education

2022.09 – 2025.07 (expected)	**Capital Normal University** – Beijing, China M.S. in Mathematics. Advisor: Professor Jilong Tong, *GPA:3.91/4.*
2018.09 – 2022.07	**Peking University** – Beijing, China B.S. in Mathematics and Applied Mathematics. Thesis Advisor: Professor Jinxing Cai.

Language Proficiency & Test Scores

Mandarin (native), English (TOEFL 96), GRE subject Mathematics: 970(97%).

Selected Coursework

- *Bachelor*: Topology, Theory of Functions of Complex Variables, Partial Differential Equations, Differential Geometry, Functions of Real Variables, Groups and Representations, Functional Analysis, Basis of Algebraic Geometry, Introduction to Differentiable Manifolds.

- *Master*: Basis of Algebraic Geometry I, Representation Theory, Lie Groups and Lie Algebras, Algebraic Number theory, Modular form and Galois representations, Topics in Arithmetic Geometry, Moduli spaces of semistable sheaves.

Seminar Organizing

2024.09 – Present	Seminar on p-adic geometry, online The link is here.
2024 Summer	Seminar on p-adic Hodge theory, online The link is here.
2022 Summer	Seminar on Algebraic Geometry

Seminar Attending

2024.09 – Present	Seminar on local Langlands for GL(2), held by Bin Zhao.

Conferences and Summer Schools

2024.08	2024 SUSTech conference in number theory and arithmetic geometry – Shenzhen, China
2024.07	International Science Summer School in Westlake University, math track – Hangzhou, China
2024.06	Seminar on Number Theory and Algebraic Geometry 2024 – Beijing, China
2023.11	**Seminar on Number Theory and Algebraic Geometry 2023** – Beijing, China

Honors and Scholarships

2024	First-class Excellent Academic Scholarship
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2022	Graduate Freshman Scholarship

Teaching Experience

Fall 2024	**Teaching assistant, Algebra I (Capital Normal University)**
Fall 2024	**A Seminar in Number Theory.** This is a seminar held by my advisor Jilong Tong. I will introduce my master's thesis in the first few classes.