

ZIQIAO XU

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EDUCACION

North China Electric Power University

BSc., Department of Mathematics and Physics–Information and Computing Science

Baoding, China

9, 2022 – Now

RESEARCH INTERESTS

Number Theory, Algebraic Geometry, Representation Theory and Modern Analysis.

CORE COURSES

Mathematics: Mathematical Analysis, Advanced Algebra, Discrete Mathematics, Measure Theory, Complex Analysis, Partial Differential Equations, Abstract Algebra, Probability Theory, Numerical Analysis, Nonlinear Programming.

Computer Science: Data Structures and Algorithms, Data Analysis, Python Programming, Software Engineering Theory and Application, Machine Learning.

SELECTED READINGS

Algebra and Number Theory: *A Course in Arithmetic* by J.-P. Serre; *Commutative Algebra* by A.Gathmann; *Multiplicative Number theory* by H.Davenport.

Analysis: *Fourier Analysis* by Elias M.Stein.

PUBLICATIONS AND PREPRINTS

Publications

- **Z, Xu, Z, Liu, Z, Wang.** *Generalizations of Catalan Numbers and Combinatorics.* The 7th International Conference on Computing and Data Science(2025),2755-2721

Preprints

- **Zi-Qiao Xu, Zhong-Xuan Mao, Jing-Feng Tian.** *Recurrence relations for the coefficients of the confluent and Gauss hypergeometric functions in the complex plane.* <http://arxiv.org/abs/2601.10040>

CONFERENCES AND SCHOOLS

The Second Mathematics Winter Course Class in GuangXi Center For Mathematical Research

11.01-11.14, 2025

Topic: mainly about PDE, Differential Geometry and Number Theory

SCHOLARSHIPS AND AWARDS

First Prize | Preliminary round of the National College Student Mathematics Competition

11, 2024

Third Prize | Final round of the National College Student Mathematics Competition

4, 2025

The Second-Class Scholarship

2024, 2025

Outstanding Student in the Department

2023, 2024, 2025