Zhenye Qian

Long Curriculum Vitae

RESEARCH INTERESTS

Partial Differential Equations and Geometric Analysis, including nonlinear elliptic PDEs, geometric measure theory.

EDUCATION

2022-2026 **B.S. in Mathematics**, *Hangzhou Normal University*, Yuhangtang Road, Yuhang District, Hangzhou, Zhejiang, P.R.China, 311121
Advisor: Zhiyuan Xu

PERSONAL AWARD

2025 S.-T.Yau College Student Mathematics Contest: Individual Awards–Chern Award, for Geometry and Topology Bronze Medal

2025 S.-T.Yau College Student Mathematics Contest: Geometry and Topology (No.14)

2024 S.-T.Yau College Student Mathematics Contest: Analysis and Differential Equation (No.86)

2022 The Chinese Mathematics Competitions (CMC) (First Prize)

STUDY EXPERIENCE

2025.7 USTC Institute of Geometry and Physics: Summer School in Geometry and Analysis
- Bernstein Problem for Minimal Surfaces and Beyond (Zhihan Wang, Cornell)

2025.6 ZJU: Partial Differential Equation Advanced Workshop
- Minmax Methods in Geometric Analysis (Tristan Rivière, ETH-Zurich)

2024.8 PKU BICMR: Summer School on Differential Geometry
- Riemannian Geometry (Chao Xia, XMU)
- Complex Geometry (Yalong Shi, NJU)
- Second order Elliptic Differential Equation (Jiakun Liu, UOW)

2024.7 USTC Institute of Geometry and Physics: Summer School in Geometry
- Some aspects of Ricci flow on non-compact manifolds (Eric Chen, UCB)
- Topics in mean curvature flow (Jinze Zhu, MIT)
- An introduction to decoupling inequalities in harmonic analysis (Shenwen Gan, WSCS)

TEACHING ASSISTANT EXPERIENCE

2025 Spring **Differential Geometry (Honor)**, *Hangzhou Normal University*
instructor: Zhiyuan Xu

✉ *qianzhenye@stu.hznu.edu.cn*

references:exercises and supplementary materials

2024 Autumn **Analytic Geometry**, *Hangzhou Normal University*
instructor: Zhiyuan Xu

references:exercises and supplementary materials

SELECTED TALKS

2024.8 **The geometric topology of frontal surfaces**, *2024 International Workshop on Geometry, Topology of Singular Submanifolds and Related Topics*, Northeast Normal University
Jilin, China

SEMINAR

2025.9-now **Elliptic Partial Differential Equations Seminar**, *online*

2025.6-now **Minimal Surfaces Seminar**, *online*
selected videos (click here)

selected topics I have talked:
- A simple survey of minimal surfaces and related aspects

the whole talks:
- A simple survey of minimal surfaces and related aspects 6.24 (Zhenye Qian, HZNU)
- The minimal surfaces equation and minimal submanifolds 7.5 (Haoyu Pan, HZNU)
- Applications of the first variation and Bernstein problem in two dimension 7.18 (Tian Zeng, CQU)
- The second Variation formula and Stability 8.1 (Tian Zeng, CQU)
- Bernstein problem I: The fundamental objects of Geometric Measure Theory 8.8 (Mutian Zhu, WU)
- Bernstein problem II: Regularity theory in Geometric Measure theory 8.15 (Mutian Zhu, WU)

2024.8-2025.3 **Riemannian Geometry and Geometry Analysis**, *Hangzhou Normal University*, *selected videos (click here)*

selected topics I have talked:
- Riemannian Submanifold and Baisc Equations, some aspects in Minimal Submanifolds in Euclidean space
- Comparison theorem in Riemannian Geometry (Rauch, Hessian and Laplacian, Volume)
- Cheeger-Gromov Convergence and Gromov's paracompactness theorem with some applications in lower bound Ricci curvature
- Bochner Technique on Riemannian Geometry and applications (Comparison theorems, Killing fields)
- Some aspects in CMC hypersurfaces: Alexandrov's theorem, Levy-Gromov Isoperimetric inequality
- Bernstein's theorem in Minimal surfaces and Plateau problem

2024.8-2024.12 **Algebraic Topology**, *Hangzhou Normal University*

selected topics I have talked:

- An Introduction to Cohomology Ring: Universal coefficient theorem, Cup product and Examples
- Some Applications of Myers-Vietors Argument: Künneth formula, Leray-Hirsch theorem in fiber bundle, Poincaré's duality for manifolds
- Some aspects in homotopy theory: Freudenthal suspention and introduction to stable homotopy groups, Hurewicz-Whitehead theorem and Motivation in Poincaré's Conjecture of 3-dim manifolds

MISCELLANEOUS

- My **Hompage**: https://zhenye-math.github.io/
- Vlogs about studying : Bilibili (click here)
- Ideas and Discussions: Zhihu (click here)