

Chong Gu

CONTACT INFORMATION

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EDUCATION

Indiana University Bloomington

Aug 2022 – Present

- Ph.D. in Mathematics
- Advisor: Professor Nam Q. Le

Indiana University Bloomington

Aug 2018 – May 2022

- B.S. in Mathematics
- B.S. in Computer Science

RESEARCH INTERESTS

Analysis of partial differential equations. More specifically, Monge–Ampère equations and linearized Monge–Ampère equations.

PUBLICATIONS AND PREPRINTS

- Guoqing Cui, **Chong Gu**, Nam Q. Le, Ling Wang, and Bin Zhou, Global Hölder estimates for linearized Monge–Ampère equations in divergence form with applications to dual semigeostrophic equations and periodic homogenization, *arXiv:2610.02071*.
- **Chong Gu**, Uniqueness and sharp boundary estimates for degenerate Monge–Ampère equations with singular measures, *arXiv:2609.27341*.
- **Chong Gu**, Triangles minimize the Monge–Ampère eigenvalue among planar bounded convex domains of a given area, *arXiv:2609.15563*.
- **Chong Gu** and Nam Q. Le, A Green’s function approach to linearized Monge–Ampère equations in divergence form and application to singular Abreu type equations, *J. Lond. Math. Soc. (2)*. **114** (2026), no. 1, Paper No. e70644 (37 pages).

HONORS AND AWARDS

William B. Wilcox Mathematics Award

May 2026

Department of Mathematics, Indiana University Bloomington

Hazel King Thompson Fellowship

April 2023

Department of Mathematics, Indiana University Bloomington

Mathematics Departmental Award for Academic Excellence

April 2022

Department of Mathematics, Indiana University Bloomington

TEACHING

Indiana University Bloomington

Instructor of record

- MATH-M 127 Precalculus Mathematics with Trigonometry *Fall 2026*
- MATH-M 125 Precalculus Mathematics *Fall 2025*

Recitation Leader

- MATH-M 211 Calculus I *Fall 2023, Fall 2024*
- MATH-M 212 Calculus II *Spring 2025*
- MATH-M 106 The Mathematics of Decision and Beauty *Spring 2026*

TALKS AND PRESENTATIONS

- (Poster) Theory and Applications of Elliptic PDE, University of California, Irvine *Aug 2026*
- 15th Ohio River Analysis Meeting, University of Kentucky *Mar 2026*
- PDE and Applied Math seminar, Indiana University Bloomington *Feb 2026*

CONFERENCES AND SUMMER SCHOOLS

- Theory and Applications of Elliptic PDE, University of California, Irvine *Aug 2026*
- Workshop on Calabi-Yau metrics and optimal transport, CMSA, Harvard University *May 2026*
- Theory and Applications of Elliptic PDE, University of California, Irvine *June 2025*
- Optimal transport, heat flow and synthetic Ricci bounds, Northwestern University *June 2025*
- Rivière-Fabes Symposium on Analysis and PDE, University of Minnesota *April 2025*

SERVICES

- Directed Reading Program on Optimal Transport *Spring 2026*
- Volunteer for Science Fest, Indiana University Bloomington *Nov 2025*

SKILLS

Programming Languages: C, C++, Java, Python, R.

Languages: Chinese (native), English (proficient).