Iqra Altaf | Curriculum Vitae

✉ iqra@uchicago.edu

Education

Academic Qualifications

○ **University of Chicago** — **Chicago**
  PhD Mathematics — *2019–present*

○ **University of British Columbia** — **Vancouver**
  M.Sc. Mathematics — *2017–2019*

○ **Indian Institute of Technology, Kanpur** — **Kanpur**
  BS Mathematics and Computing — *2013–2017*

○ **Government High School** — **Vikeypora, Kashmir**
  High School — *2011–2013*

Research Interests

○ Geometric Measure Theory and Harmonic Analysis.

Papers

○ Scaled Oscillation and Level Sets (w/ M. Csörnyei and B. Wilson)
○ Hausdorff Dimension of Besicovitch Sets of Cantor Graphs (w/ M. Csörnyei and Kornélia Héra) .
○ Distance set bounds for Polyhedral Norms via Effective Dimension (w/ Ryan Bushling and Bobby Wilson) .
○ A One-Dimensional Planar Besicovitch Set(Upcoming) .
○ A Metric Embedding Theorem(Upcoming) .

Conferences and Invited Talks

○ Towards the sharpness of Sard's Theorem–Analysis seminar, Washington University, 09/2024
○ Towards the sharpness of Sard's Theorem–Analysis seminar, Stony Brook University, 02/2024
○ A one-dimensional Kakeya type set – Recent developments in Harmonic Analysis, Joint Mathematics Meetings, 2024
○ On Distance set Bounds for Polyhedral Norms – Harmonic Analysis in the Midwest, AMS Sectional Meeting at Creighton University, Fall 2023

- On Scaled Oscillation and Level Sets – Special Session on Analysis and Metric Spaces, Joint Mathematics Meetings, 2022
- Hausdorff Dimension of Besicovitch Sets of Cantor Graphs – Analysis seminar, University of Washington, 06/2022
- A Planar Kakeya-type Set of Dimension less than 2 – Fractals and Related Fields IV, Porquerolles, France.

Achievements and Awards

- Radix Trading Prize, University of Chicago, 2023-2024

- Suman Gupta Gold medal, IIT Kanpur, 2013-2017.

- Academic Excellence award from IIT Kanpur for the year 2014-2015.

- Academic Excellence award from IIT Kanpur for the year 2015-2016.

Teaching experience

- **Teaching Assistant** - **University of British Columbia.**
  Math 184-Calculus, Fall 2017.
  Math 200-Multivariable Calculus, Spring 2017.
  Math 320-Real Variables I, Fall 2018..
- **Teaching Assistant** - **University of Chicago.**
  Math 207-Honors Analysis I, Autumn 2020.
  Math 208-Honors Analysis II, Winter 2021.
  Math 209-Honors Analysis III, Fall 2021..
- **Instructor** - **University of Chicago.**
  Math 131-Calculus I, Fall 2021.
  Math 132-Calculus II, Winter 2022.
  Math 152-Calculus II, Autumn 2022.
  Math 152-Calculus II, Winter 2023.
  Math 19620-Linear Algebra, Spring 2023.
  Math 151-Calculus I, Spring 2024.
- **Mentorship** - **University of Chicago.**
  Mentor of the Analysis group of the REU, Summer 2021, 2022, 2023.

Technical skills

- **Languages:** Kashmiri, Urdu, English and elementary Arabic.

- **Programming Languages:** Proficient in C, C++, Matlab, TeX.