

Tongou Yang—Curriculum Vitae

University of California, Los Angeles
Department of Mathematics
520 Portola Plaza
Los Angeles, California
90095 United States

Citizenship: Chinese (Hong Kong)
Email: tongouyang@math.ucla.edu
Homepage: <https://www.math.ucla.edu/~tongouyang/>
Languages: Chinese (Mandarin, Cantonese), English

EDUCATION

The University of British Columbia, Vancouver, BC, Canada (2017-2021):

Doctor of Philosophy in Mathematics

Advisor: Malabika Pramanik

Thesis Title: *Configurations and decoupling: a few problems in Euclidean harmonic analysis*

The Chinese University of Hong Kong, Shatin, Hong Kong, China (2015-2017):

Master of Philosophy in Mathematics

Advisor: Po Lam Yung

Thesis Title: *Keakeya and restriction problems in harmonic analysis*

The Chinese University of Hong Kong, Shatin, Hong Kong, China (2011-2015):

Bachelor of Science in Mathematics, First Honours Degree

Tung Wah High School, Dongguan, Guangdong, China (2005-2011)

RESEARCH INTERESTS

Harmonic Analysis on Euclidean Spaces, Geometric Measure Theory, Analysis of Fractals

CURRENT POSITION

1. The University of California, Los Angeles, CA, United States (2023-)

Adjunct Assistant Professor Mentors: Terence Tao and Hong Wang (now at NYU)

PREVIOUS POSITIONS

1. The University of Wisconsin-Madison, WI, United States (2022-2023)

Van Vleck Visiting Assistant Professor Mentors: Shaoming Guo and Betsy Stovall

2. The University of British Columbia, Vancouver, BC, Canada (2021-2022)

Postdoctoral Fellow Mentors: Joshua Zahl and Malabika Pramanik

PUBLICATIONS

1. *Decoupling for smooth surfaces in \mathbb{R}^3* (2023), with Jianhui Li, to appear in American Journal of Mathematics, [arxiv link](#)
2. *Decoupling for mixed-homogeneous polynomials in \mathbb{R}^3* (2021), with Jianhui Li, Mathematische Annalen, [link](#)
3. *Uniform l^2 -decoupling in \mathbb{R}^2 for polynomials*, Journal of Geometric Analysis, **31** (2021), no. 11, 10846-10867, [link](#)
4. *On sets containing an affine copy of bounded decreasing sequences*, Journal of Fourier Analysis and Applications, **26** (2020), no. 5, 73, [link](#)

PREPRINTS

1. *A Kaufman type restricted projection theorem in \mathbb{R}^3* (2022), with Malabika Pramanik and Joshua Zahl, [arxiv link](#)
2. *A multi-parameter cinematic curvature* (2023), with Mingfeng Chen and Shaoming Guo, [arxiv link](#)

THESES

Configurations and decoupling: a few problems in Euclidean harmonic analysis, PhD thesis (2021), available [here](#)

Keakeya and restriction problems in harmonic analysis, MPhil thesis (2017), available [here](#)

ACADEMIC VISITS AND EVENTS

Research talks:

Young Scholars seminar, Nanjing University, Nanjing, Jiangsu, China (May 2023)

HAFS 2023, Ohio State University, Columbus, OH, United States (Mar 2023)

Short talk at El Escorial XI, El Escorial, Madrid, Spain (Jun 2022)

Analysis seminar by Hubei University, online (May 2022)

Analysis seminar at University of Wisconsin, Madison, WI, United States (Feb 2022)

HAPPY (Harmonic Analysis Peoples Presentations on YouTube), online (Jan 2022)

UCLA Analysis seminar, Los Angeles, CA, United States (Dec 2021)

17th Prairie Analysis Seminar by Kansas State University, online (Nov 2021)

Special Session on Analysis, Combinatorics and Geometry of Fractals, AMS virtual meeting (invited but unable to attend) (May 2021)

Fourier Restriction Online 2021 (Mar 2021)

Colloquium for receiving Graduate research Award at UBC, Vancouver, BC, Canada (Jan 2021)

Winter Meeting of Canadian Mathematical Society (online) (Dec 2020)

Harmonic Analysis Seminar at UBC, Vancouver, BC, Canada (Nov 2020)

Zoom meeting held by Prof. Shaoming Guo (Sep 2020)

The Eight Pacific Rim Conference in Mathematics, online (Aug 2020)

Madison Lectures in Fourier Analysis, University of Wisconsin, Madison, WI, United States (May 2019)

HAPDE, University of Connecticut, Mansfield, CT, United States (Mar 2019)

Winter Meeting of Canadian Mathematical Society, Vancouver, BC, Canada (Dec 2018)

Mid Atlantic Analysis Meeting, Blacksburg, VA, United States (Nov 2018)

Academic visits:

Southern University of Science and Technology of China, Shenzhen, Guangdong, China (Aug 2021 and May 2023)

The Chinese University of Hong Kong, Shatin, Hong Kong, China (Nov 2017, Aug 2018, Jun 2019, Jul 2021, Dec 2022)

Summer schools, conferences, workshops, etc:

Study guide writing workshop, University of Pennsylvania, Philadelphia, PA, United States (Aug 2023)

Fourier Analysis @200 and Young Researchers Symposium, Edinburgh, Scotland, United Kingdom (Jun 2022)

Workshop on harmonic analysis and related topics, Centre de Recerca Matemàtica, Barcelona, Catalonia, Spain (Jun 2022)

Summer school in Harmonic Analysis and PDE in the Basque Center for Applied Mathematics, Bilbao, Basque, Spain (Jul 2019)

Summer School in harmonic analysis at the Park City Mathematics Institute, Park City, UT, United States (Jul 2018)

International Conference of Chinese Mathematicians, Beijing, China (Aug 2016)

Summer school at the Yau Mathematical Sciences Center, Beijing, China (Jun-Aug 2016)

REU in the Faculty of Mathematics, University of Waterloo, Waterloo, ON, Canada (Jun-Aug 2014)

REFeree OF JOURNALS

Proceedings of the Edinburgh Mathematical Society (2023)

International Mathematics Research Notices (2023)

Mathematische Annalen (2021)

Journal of Integer Sequences (2020)

NOTABLE TEACHING EXPERIENCE

Instructor of:

MATH 551 (Elementary Topology) at UW-Madison, 2022-23 Term 2

MATH 521 (Analysis I) at UW-Madison, 2022-23 Term 1

MATH 300 (Introduction to Complex Variables) at UBC, 2021-22 Term 2

MATH 105 (Integral Calculus with Applications to Commerce and Social Sciences) at UBC, 2018-19 Term 2

Diversity in Mathematics (high school summer camp for underrepresented groups), Vancouver, BC, Canada (Aug 2019)

Small class instructor of:

MATH 104 (Differential Calculus with Applications to Commerce and Social Sciences) at UBC, 2021-22 Term 1

MATH 180 (Differential Calculus with Physical Applications) at UBC, 2018-19 Term 1

MATH 2060 (Mathematical Analysis II) at CUHK, 2016-17 Term 2

MATH 2050 (Mathematical Analysis I) at CUHK, 2016-17 Term 1

NOTABLE AWARDS AND SCHOLARSHIPS

Croucher Postdoctoral Fellowship, Croucher Foundation, Hong Kong (2022)

Graduate research award, Department of Mathematics, UBC (2020)

Master's List and Morningside College Scholarship, Morningside College, CUHK (2011-12, 2012-13, 2013-14, 2014-15)

Dean's List, Science Faculty, CUHK (2011-12, 2012-13, 2014-15)

(As of August 2023)