Lechao Xiao

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RESEARCH INTERESTS

Harmonic Analysis, in particular, multilinear operators, oscillatory integrals, singular Radon-like transforms, time-frequency analysis and resolution of singularities.

POSITION

University of Pennsylvania, Hans Rademacher Instructor,   2014-Present
- Postdoctoral advisor: Philip T. Gressman

EDUCATION

University of Illinois at Urbana-Champaign,

Ph.D., Mathematics,   2009-2014
- Advisor: Xiaochun Li
- Thesis: Sharp estimates for trilinear oscillatory integral forms

Zhejiang University, Hangzhou, China

B.S., Mathematics,   2005-2009

PREPRINTS AND PUBLICATIONS

1. "Higher decay inequalities for multilinear oscillatory integrals," with M. Gilula and P. T. Gressman, preprint, arXiv:1612.00050.

2. "Endpoint estimates for one-dimensional oscillatory integral operators," *submitted,* arXiv:1602.05663.

3. "Sharp estimates for trilinear oscillatory integrals and an algorithm of two-dimensional resolution of singularities," *to appear in Rev. Mat. Ibero.*

4. "Maximal decay inequalities for trilinear oscillatory integrals of convolution type," with P. T. Gressman, *J. Func. Anal.*, **271**, No. 12 (2016), 3695 -3726.

5. "Uniform estimates for bilinear Hilbert transforms and bilinear maximal functions associated to polynomials," with X. Li, *Amer. J. Math.*, **138**, No. 4 (2016), 907-962.

6. "Bilinear Hilbert transforms associated to plane curves," with J. Guo, *J. Geom. Anal.* **26** (2016), no. 2, 967-995.

AWARDS

Student Awards	University of Illinois at Urbana-Champaign
• Gene H. Golub Fellowship	Spring 2014

TEACHING EXPERIENCE

Instructor, University of Pennsylvania

Math 240 - Calculus III	Fall 2016
Math 361 - Advanced Calculus II	Fall 2016
Math 104 - Calculus I	Spring 2016
Math 360 - Advanced Calculus	Spring 2016
Math 410 - Complex analysis	Fall 2015
Math 313 - Computational Linear Algebra	Spring 2015
Math 114 - Calculus II	Fall 2014
Math 420 - Ordinary Differential Equations	Fall 2014

Teaching Assistant, University of Illinois at Urbana-Champaign

Math 231 - Calculus II	Fall 2013
Math 234 - Calculus for Business I	Spring 2013
Math 220 - Calculus	Fall 2012

Grading, University of Illinois at Urbana-Champaign

Math 540, 542 - Real Analysis, Complex Analysis	Spring 2012
Math 347, 461 - Fundamental Math, Probability Theory	Fall 2011

On the UIUC List of Teachers Ranked as Excellent by Their Students (Fall 2012, Spring 2013, Fall 2013)

INVITED TALKS
- 2016 November, Analysis seminar, Drexel University, Philadelphia, PA

- 2016 November, Analysis seminar, University of Pennsylvania, Philadelphia, PA

- 2016 July, Analysis seminar, Zhejiang University, Hangzhou, China

- 2016 July, Analysis seminar, University of Science and Technology of China, Hefei, China

- 2016 June, Analysis seminar, Sun Yat-Sen University, Guangzhou, China

- 2016 June, Analysis seminar, Beijing Normal University, Beijing, China

- 2015 April, Analysis Seminar, University of Missouri, Columbia, MO

- 2014 September, Analysis seminar, University of Pennsylvania, Philadelphia, PA

- 2014 January, Analysis seminar, Sun Yat-Sen University, Guangzhou, China

- 2013 December, Analysis seminar, Zhejiang Normal University, Jinhua, China

CONTRIBUTED TALKS
- 2016 October, Texas Analysis and Mathematical Physics Symposium 2016, Rice University, TX
- 2016 May, Conference in Harmonic Analysis in Honor of Michael Christ, University of Wisconsin - Madison, WI

CONFERENCES AND WORKSHOPS ATTENDED
- Analysis and Beyond: Celebrating Jean Bourgain's Work and Impact
  IAS (May 2016)

- Conference in Harmonic Analysis in Honor of Michael Christ
  Wisconsin (May 2016)

- Carleson theorems and multilinear operators
  AIM (May 2015)

- The Kakeya Problem, Restriction Problem, and Sum-product Theory
  IPAM (May 2014)

- Analysis and Applications: A Conference in Honor of Elias M. Stein
  Princeton University (May 2011)

- A conference on "Perspectives in High Dimensions"
  Case Western Reserve University (Aug 2010)

- The Fourth International Congress of Chinese Mathematicians
  Zhejiang University, Hangzhou China (Dec 2007)

SERVICE
- Committee for the graduate admission, 2014-2015
- Committee for the preliminary exam, 2015-2017

LANGUAGE
- Native Language: (Chinese) Mandarin and Cantonese.
- Foreign Language: English.