

Yumeng Ou

CONTACT INFORMATION	Department of Mathematics, 2-241 Massachusetts Institute of Technology 77 Massachusetts Avenue Cambridge MA 02139 USA	+1(617)253-4986 yumengou@mit.edu http://yumengou.mit.edu
RESEARCH INTERESTS	Harmonic analysis and PDEs.	
EMPLOYMENT	Massachusetts Institute of Technology , Cambridge MA, USA C. L. E. Moore Instructor, Department of Mathematics, September 2016 - May 2019 Mathematical Sciences Research Institute , Berkeley CA, USA Postdoctoral Fellow, January 2017 - May 2017	
EDUCATION	Brown University , Providence RI, USA Ph.D. in Mathematics, May 2016 <ul style="list-style-type: none">• Advisor: Jill Pipher• Dissertation: <i>Multi-parameter commutators and new function spaces of bounded mean oscillation</i> M.S. in Mathematics, May 2013 Peking University , Beijing, China B.S. in Mathematics, July 2011	
PUBLICATIONS/ PREPRINTS	<i>Sparse domination of Hilbert transforms along curves</i> , with Laura Cladek. preprint arXiv:1704.07810. (2017). <i>A cone restriction estimate using polynomial partitioning</i> , with Hong Wang. preprint arXiv:1704.05485. (2017). <i>A sparse domination principle for rough singular integrals</i> , with José M. Conde-Alonso, Amalia Culiuc and Francesco Di Plinio. To appear in Anal. PDE. (2016). <i>Uniform sparse domination of singular integrals via dyadic shifts</i> , with Amalia Culiuc and Francesco Di Plinio. To appear in Math. Res. Lett. (2016). <i>Product BMO, little BMO and Riesz commutators in the Bessel setting</i> , with Xuan Thinh Duong, Ji Li, Brett D. Wick and Dongyong Yang. preprint arXiv:1609.01368. (2016). <i>Domination of multilinear singular integrals by positive sparse forms</i> , with Amalia Culiuc and Francesco Di Plinio. preprint arXiv:1603.05317. (2016). <i>Little BMO and Journé commutators</i> , with Stefanie Petermichl. To appear in Harmonic analysis, function theory, operator theory and applications. (2015). <i>A modulation invariant Carleson embedding theorem outside local L^2</i> , with Francesco Di Plinio. To appear in J. Anal. Math. (2015).	

Banach-valued multilinear singular integrals, with Francesco Di Plinio. To appear in *Indiana Univ. Math. J.* (2015).

Multi-parameter singular integral operators and representation theorem, *Rev. Mat. Iberoam.* **33** (2017), no. 1, 325-350. DOI: 10.4171/RMI/939 (MR3615454).

Higher order Journé commutators and characterizations of multi-parameter BMO, with Stefanie Petermichl and Elizabeth Strouse, *Adv. Math.* **291** (2016), 24-58. DOI: 10.1016/j.aim.2015.12.029 (MR3459014).

Upper bound for multi-parameter iterated commutators, with Laurent Dalenc, *Publ. Mat.* **60** (2016), 191-220. DOI: 10.5565/PUBLMAT_60116_07 (MR3447738).

A $T(b)$ theorem on product spaces, *Trans. Amer. Math. Soc.* **367** (2015), no. 9, 6159-6197. DOI: 10.1090/S0002-9947-2015-06246-1 (MR3356933).

TALKS

Workshop: Recent developments in harmonic analysis, MSRI, USA (May 2017).

Several complex analysis seminar, Rutgers University, USA (March 2017).

PDE/Analysis seminar, MIT, USA (November 2016).

Conference in harmonic analysis in honor of Michael Christ, University of Wisconsin-Madison, USA (May 2016).

Analysis seminar, SUNY-Albany, USA (March 2016).

AMS southeastern sectional meeting, University of Georgia, USA (March 2016).

Analysis seminar, University of Wisconsin-Madison, USA (December 2015).

Analysis seminar, University of Pennsylvania, USA (October 2015).

AMS central sectional meeting, Michigan State University, USA (March 2015).

Southeastern analysis meeting, University of Georgia, USA (March 2015).

Analysis seminar, Brown University, USA (March 2015).

Annual graduate student math conference, Brown University, USA (February 2015).

Harmonic analysis seminar, Université Paul Sabatier, France (June 2014).

Harmonic analysis seminar, University of Helsinki, Finland (November 2013).

Analysis seminar, Brown University, USA (October 2013).

POSTERS

AWM workshop at Joint Mathematics Meetings 2016, Seattle, USA (January 2016).

Workshop for women in analysis and PDE, IMA, University of Minnesota, USA (May 2015).

AWM research symposium, University of Maryland, USA (April 2015).

CONFERENCES/
WORKSHOPS

AIM workshop: Sparse domination of singular integral operators, American Institute of Mathematics, USA (October 2017). Organizer.

Summer school: Decoupling and polynomial methods in analysis, Kopp, Germany (October 2017).

Internet analysis seminar: Harmonic analysis associated to elliptic operators, Georgia Institute of Technology, USA (July 2015).

Spring/summer school: Carleson theorems and Radon type behaviors, University of Bonn, Germany (May 2014).

AWARDS

Joukowsky Family Foundation Outstanding Dissertation Award, Brown University (2016).

B C OF SIGMA XI Prize (Recognition for outstanding achievement in mathematics), Brown University (2016).

PROFESSIONAL
SERVICES

Referee for: *Journal of Mathematical Analysis and Applications*; *Analysis & PDE*; *Illinois Journal of Mathematics* (2); *New York Journal of Mathematics*.

TEACHING
EXPERIENCE

Massachusetts Institute of Technology, USA

- Teaching Assistant
 - *Differential equations (18.03)*, Fall 2016

Brown University, USA

- Teaching Fellow (primary lecturer)
 - *Advanced placement calculus (physics/engineering) (Math 0190)*, Fall 2015
 - *Introductory calculus II (Math 0100)*, Spring 2015
 - *Introductory calculus I (Math 0090)*, Spring 2014
- Teaching Assistant
 - *Introductory calculus II (Math 0100)*, Fall 2014
 - *Introductory calculus I (Math 0090)*, Fall 2013, Fall 2012
- Tutor
 - *Complex analysis (Math 1260)*, Fall 2013
 - *Introductory calculus II (Math 0100)*, Spring 2013, Fall 2012
 - *Introductory calculus I (Math 0090)*, Fall 2014
- Sheridan Certificate I: Reflective teaching, Fall 2013, Spring 2014

OTHER
ACTIVITIES

Analysis and beyond: celebrating Jean Bourgain's work and impact, Institute for Advanced Study, USA (May 2016).

Harmonic analysis and PDEs: recent developments and future directions, a conference in honor of C. E. Kenig, University of Chicago, USA (September 2014).

Harmonic analysis, probability and applications: a conference in honor of Aline Bonami, Université d'Orleans, France (June 2014).

Analysis, complex geometry, and mathematical physics: a conference in honor of Duong H. Phong, Columbia University, USA (May 2013).

Workshop for women in analysis and PDE, IMA, University of Minnesota, USA (June 2012).

RELEVANT
SKILLS

Languages: Mandarin Chinese (native), English (fluent), French (basic knowledge)
Computing: C, C++, MATLAB, Mathematica, L^AT_EX