

Yining Zhang

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Employment **Visiting Assistant Professor** 2019-2022
Department of Mathematics, University of Colorado, Boulder, CO, USA

Education **Ph.D. in Mathematics** 2013-2019
Indiana University, Bloomington, IN, USA
Thesis title: Cyclic pairings and noncommutative Poisson structures
Thesis Advisor: Ajay C. Ramadoss

Research Interests Homological algebra, homotopical algebra, and noncommutative geometry

Publications & Preprints

1. *Curved Koszul duality and cyclic (co)homology*. Preprint (2021), [arXiv:2110.04893](https://arxiv.org/abs/2110.04893).
2. *Hodge decomposition of string topology* (joint with Yu. Berest and A. C. Ramadoss). *Forum Math. Sigma* **9** (2021), e33.
3. *Cyclic pairings and derived Poisson structures* (joint with A. C. Ramadoss). *New York J. Math.* **25** (2019), 1–44.
4. *Dual Hodge decompositions and derived Poisson brackets* (joint with Yu. Berest and A. C. Ramadoss). *Selecta Math. (N.S.)* **23** (2017), no. 3, 2029–2070.

Invited Talks

1. Curved Koszul duality and cyclic (co)homology March 2022
Topology Seminar,
Bowling Green State University, Bowling Green, OH, USA
2. Curved Koszul duality and cyclic (co)homology Nov. 2021
Deformation Theory Seminar,
University of Pennsylvania, Philadelphia, PA, USA
3. Hodge decomposition of string topology April 2020
Topology Seminar,
Purdue University, West Lafayette, IN, USA
4. Derived Poisson structures and derived representation schemes Dec. 2018
Geometry and Topology Seminar,
Sichuan University, Chengdu, China
5. Derived Poisson structures and derived representation schemes Dec. 2018
Postdoc Seminar,
BICMR, Peking University, Beijing, China
6. Dual Hodge decompositions and derived Poisson brackets June 2017
Geometry and Physics Seminar,
Yau Mathematical Sciences Center, Tsinghua University, Beijing, China
7. Dual Hodge decompositions and derived Poisson brackets June 2017
Algebra Seminar,
Capital Normal University, Beijing, China

Seminar Talks	1. Curved Koszul duality and cyclic (co)homology <i>Noncommutative Geometry Seminar,</i> University of Colorado, Boulder, CO, USA	Nov. 2021
	2. Hodge decomposition of string topology <i>Noncommutative Geometry Seminar,</i> University of Colorado, Boulder, CO, USA	April 2020
	3. The Kontsevich-Rosenberg principle for bi-symplectic forms <i>Graduate Student Poisson Seminar,</i> Indiana University, Bloomington, IN, USA	April 2018
	4. Poisson homology and cohomology <i>Graduate Student Poisson Seminar,</i> Indiana University, Bloomington, IN, USA	February 2018
	5. Graded and DG Poisson algebras <i>Graduate Student Poisson Seminar,</i> Indiana University, Bloomington, IN, USA	January 2018
	6. Poincaré duality CDGA and Hochschild homology of coalgebras <i>Graduate Student String Topology Seminar,</i> Indiana University, Bloomington, IN, USA	Nov. 2017
	7. Smoothness: Commutative vs Non-commutative <i>Graduate Student Algebra Seminar,</i> Indiana University, Bloomington, IN, USA	October 2016

Teaching Experience

University of Colorado, Boulder, CO, USA

Homological Algebra

Spring 2022

Introduction to Probability Theory

Fall 2021, Spring 2021, Fall 2020, Spring 2020

Linear Algebra for Non-math Majors

Spring 2021, Spring 2020, Fall 2019

Linear Algebra for Math Majors

Spring 2022, Summer 2020

Indiana University, Bloomington, IN, USA

Teaching:

Pre-Calculus Math with Trigonometry

Fall 2018

Pre-Calculus Math

Fall 2017

Recitation:

Calculus I

Fall 2016 and Fall 2015

Mentorship

Research Experiences for Undergraduates

Summer 2021

Derived Poisson Structure on \mathfrak{sl}_2

(2 undergraduate students and 1 high school student)

University of Colorado

Directed Reading Program

Spring 2017

Lie algebras

(1 undergraduate student)

Indiana University

Honors and Awards	Glenn Schober Memorial Travel Award <i>Indiana University</i>	2015
	Robert E. Weber Memorial Award <i>Indiana University</i> (given annually to the best students on written qualifying exams)	2014
	College of Arts and Sciences Top Up Award <i>Indiana University</i>	2013
Referee for	<ul style="list-style-type: none"> • New York Journal of Mathematics 	
Service	Organizer of Noncommutative Geometry Seminar <i>University of Colorado</i>	Spring 2020-present
	Organizer of Graduate Student Poisson Seminar <i>Indiana University</i>	Spring 2018
	Co-organizer of Graduate Algebra Seminar <i>Indiana University</i>	Fall 2015
Languages	Chinese: Native English: Fluent French: Intermediate	