

Harshit Yadav

CONTACT INFORMATION	<i>Work address</i>	University of Alberta Department of Mathematics Edmonton AB T6G 2G1 ,Canada
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PERSONAL INFORMATION	Birth date and location:	November 13, 1995; Gurdaspur, Punjab, India
	Citizenship:	India
EMPLOYMENT	University of Alberta	Aug. 2023 -
	Max-Wyman Assistant Professor	
EDUCATION	Rice University	July 2020 - May 2023
	Ph.D. in Mathematics	
	- Advisor: Professor Chelsea Walton	
	University of Illinois at Urbana-Champaign	August 2017 - July 2020
	M.S., Ph.D in Mathematics	
	- Advisor: Professor Chelsea Walton	
	Indian Institute of Technology, Kanpur	May 2017
	Bachelor of Science, Mathematics	
RESEARCH INTERESTS	Tensor categories, fusion categories, Hopf algebras, Frobenius algebras, topological quantum field theory	
HONORS AND AWARDS	2022 - Nettie S. Autrey Fellowship (Rice University). 2020 - Program Associate at MSRI for the Quantum Symmetries program. 2013 - Secured All India Rank 1876 in IIT Advanced. 2013 - Secured All India Rank 209 in JEE Mains 2013 among 1.65 million candidates. 2012 - KVPY fellowship (All India Rank 142).	
PUBLICATIONS AND PREPRINTS	(7) On unimodular module categories <i>Advances in Mathematics</i> , 432, 109264 (2023). (6) Frobenius monoidal functors from (co)Hopf adjunctions , <i>Proceedings of the AMS</i> , 152, no. 2, 471-487 (2024). (5) On non-counital Frobenius algebras , with A. Hernandez and C. Walton, <i>Journal of Algebra and its Applications</i> , 2550018 (2023). (4) Filtered Frobenius algebras in monoidal categories , with C. Walton, <i>International Mathematics Research Notices</i> , rnac314 (2022). (3) The ABCDs of Schubert calculus , with C. Robichaux and A. Yong, <i>Séminaire Lotharingien de Combinatoire</i> , B85a (2020). (2) Equivariant cohomology, Schubert calculus, and edge labeled tableaux , with C. Robichaux and A. Yong <i>Facets of Algebraic Geometry: A Volume in Honour of William Fulton's 80th Birthday</i> , LMS Lecture Note Series, Vol. 2 (2022), Cambridge University Press, 284–335. (1) Autoequivariant Network Search via Group Decomposition , with S. Basu, A. Magesh and L. R. Varshney,	

arxiv:2104.04848, *arXiv preprint*.

INVITED AND
CONTRIBUTED
TALKS/POSTERS

On unimodular module categories

- BIRS, Banff December 2023
- Rocky Mountain representation theory seminar October 2023
- Mathematical Physics Seminar, Perimeter Institute, September 2023
- Mathematical Physics seminar, University of Hamburg June 2023
- Shibaura Algebra Seminar, SIT, Japan May 2023
- AMS sectional meeting, University of Cincinnati April 2023
- Seattle Noncommutative Algebra Day March 2023
- Quantum symmetries program, CRM Montreal Oct 2022
- AMS fall sectional meeting, University of Utah Oct 2022

On non-counital Frobenius algebras

- Categories and Companions Symposium Sept 2022
- Hopf algebras, monoidal categories and related topics July 2022
- Graduate Algebra Symposium, UT Arlington April 2022
- Seattle Noncommutative Algebra Day (virtual) March 2022

Filtered Frobenius algebras in monoidal categories

- Quantum Groups Seminar (virtual) July 2022
- Algebra seminar, Indian University April 2022
- Algebra seminar, Texas A&M University March 2022
- Quantum algebra seminar, Ohio State University March 2022
- Seattle Noncommutative Algebra Day (virtual) May 2021
- AMS Spring sectional (virtual) March 2021

EXPOSITORY
TALKS

Hopf algebras and Quantum Symmetries

- Seminar at Google X November 2021

Introduction to Topological Quantum Field Theories

- Current Mathematics Seminar, Rice University October 2021

Various reading group talks at Rice, UIUC

2019-2022

MENTORING

Amanda Hernandez, Rice University

2021-2022

Topic: (Weak) Hopf algebras and (quasi) Frobenius algebras [paper]

TEACHING

University of Alberta

Instructor

Math 228: Winter 2023

Rice University

Grader

Math 357: Spring 2022

Grader

Math 356: Fall 2020, Fall 2021

Teaching Assistant (Recitation)

Math 302: Spring 2021

University of Illinois at Urbana-Champaign

Teaching Assistant (Recitation)[†]

Math 241, Calculus 3: Fall 2017, Fall 2018, Spring 2019, Fall 2019

Math 231, Calculus 2: Spring 2018

[†] = On the list of teachers ranked outstanding 3 times, ranked excellent 1 time.

SERVICE	Aspects of Mathematical Physics Seminar, UoA Co-organizer	2023-24
	Graduate Student Panelist, Rice University Gulf Coast Undergraduate Research Symposium	October 2021
	Algebra-Geometry-Combinatorics Seminar, UIUC Co-organizer	2018-19
	Counselling service, IIT Kanpur Student guide	2014-15
CONFERENCES AND SCHOOLS	Symmetric Tensor Categories and Representation Theory IPAM, UCLA	Jan 2024*
	Subfactors and Fusion 2-categories BIRS, Banff, Canada	Dec 2023
	Algebraic and Combinatorial methods in Representation Theory ICTS, Bangalore, India	Nov 2023
	AMS Spring Sectional Meeting University of Cincinnati, Ohio	April 2023
	Quantum symmetries: Tensor categories, TQFTs, Vertex algebras CRM, Montreal, Canada	October 2022
	AMS Fall Sectional Meeting Salt Lake City, Utah	October 2022
	AIM: Higher categories and topological order San Jose, California	September 2022
	Categories and Companions Symposium	September 2022*
	Hopf algebra, monoidal categories and related topics	July 2022*
	Graduate Algebra Symposium UT Arlington, Texas	April 2022*
	Mathematical Congress of Americas	July 2021*
	AMS Spring Sectional Meetings	March, April 2021*
	Joint Math Meetings	Jan 2021, April 2022*
	Seattle Noncommutative Algebra Days U. of Washington, Seattle	Feb 2020, Dec 2020*, May 2021* March 2022*, March 2023
	Introductory Workshop: Quantum Symmetries MSRI, Berkeley	Feb 2020
	Connections for Women: Quantum Symmetries MSRI, Berkeley	Jan 2020
	Quasy-Con UIUC	November 2019
	Quantum Symmetries summer school Universidad de los Andes	June, July 2019
	OSU Summer research program on quantum symmetries Ohio State University	June 2019
	ALGECOM 16 Loyola University	May 2019

Combinatorics and beyond University of Michigan	November 2018
Representation Theory, Combinatorics, and Geometry University of Virginia	October 2018
Summer school on Algebraic group actions McMaster University	June 2018
OSU workshop on Schubert Calculus Ohio State University	May 2018
ALGECOM 16 University of Michigan	March 2018

*= attended virtually