

Hitesh Gakhar

CONTACT INFORMATION	Department of Mathematics Michigan State University 619 Red Cedar Road East Lansing, Michigan, 48823	gakharhi@msu.edu https://www.hiteshgakhar.com
RESEARCH INTERESTS	Topological Data Analysis, Applied Topology	
EDUCATION	Michigan State University Ph.D., Mathematics, Expected in May 2020 Advisor: Jose A. Perea Indian Institute of Science Education and Research-Mohali B.S.-M.S., Mathematics, 2014 M.S. Thesis Advisor: Lingaraj Sahu Dissertation: Analysis of self adjoint operators	
PUBLICATIONS	Hitesh Gakhar and Jose A. Perea, <i>Künneth Formulae in Persistent Homology</i> , 2018; preprint available on request	
CURRENT PROJECTS	Hitesh Gakhar and Jose A. Perea, <i>Sliding window embeddings of quasiperiodic functions and their persistent homology</i>	
TALKS AND POSTERS	<i>Künneth Formulae in Persistent Homology</i> , AMS Contributed Paper Session on General Topology, Algebraic Topology, and Topology of Manifolds, Joint Mathematics Meeting, Baltimore, Scheduled to talk on January 17, 2019 <i>Künneth Formulae in Persistent Homology</i> , Graduate Student Geometry & Topology Seminar, Department of Mathematics, Michigan State University, Scheduled to talk on November 14, 2018 <i>Persistent Künneth Formula(Poster)</i> , Theory and Foundations of TGDA, The Ohio State University, Columbus, May 21, 2018 <i>Sliding window embeddings of quasiperiodic functions</i> , 16th Graduate Student Topology and Geometry Conference, University of Illinois at Chicago, April 8, 2018 <i>Dualities in Persistent Cohomology</i> , Graduate Student Geometry & Topology Seminar, Department of Mathematics, Michigan State University, January 17 & 24, 2018 <i>Persistent Homology</i> , Graduate Student Geometry & Topology Seminar, Department of Mathematics, Michigan State University, April 13, 2017 <i>Serre Spectral sequences</i> , Graduate Student Geometry & Topology Seminar, Department of Mathematics, Michigan State University, November 19, 2015	
CONFERENCE ORGANIZATION	15th Graduate Student Topology and Geometry Conference, Michigan State University, April 8-9, 2017	

CONFERENCE AND
WORKSHOP
ATTENDANCE

Joint Mathematics Meeting, Baltimore, Scheduled to attend

Tutorial on Multiparameter Persistence, Computation, and Applications, Institute of Mathematics and its Applications, University of Minnesota, Minneapolis, August 2018

Theory and Foundations of TGDA, The Ohio State University, Columbus, May 2018

16th Graduate Student Topology and Geometry Conference, University of Illinois at Chicago, April 2018

3rd Graduate Student Conference in Algebra, Geometry, and Topology, Temple University, Philadelphia, June 2017

15th Graduate Student Topology and Geometry Conference, Michigan State University, East Lansing, April 2017

Knots in Washington-XLIII, George Washington University, Washington D.C., December 2016

14th Graduate Student Topology and Geometry Conference, Indiana University, Bloomington, April 2016

Midwest Topology Seminar, Wayne State University, Detroit, October 2015

AMS Sectional Meeting, Loyola University, Chicago, October 2015

Heidelberg Laureate Forum, Universitat Heidelberg, Heidelberg, Germany, September 2013

TEACHING
EXPERIENCE

Instructor Positions

2018 Fall MTH 299 (Transitions - introduction to proofs course for mathematics majors and minors, 25 students)

2018 Summer MTH 299 (Transitions - introduction to proofs course for mathematics majors and minors, 11 students)

2017 Summer MTH 234 (Calculus III)

2016 Summer MTH 235 (Differential Equations)

2016 Spring MTH 235 (Differential Equations)

2015 Summer MTH 124 (Survey of Calculus I)

Teaching Assistant Positions

2017 Spring MTH 299 (Transitions - introduction to proofs course for mathematics majors and minors)

2016 Fall MTH 234 (Calculus III)

2015 Fall MTH 133 (Calculus II)

2015 Spring MTH 133 (Calculus II)

2014 Fall MTH 235 (Calculus II)

Other Teaching and Mentoring

2018 Fall, *Teaching Observation Assistant*, Duties: Observing Undergraduate
2017 Fall Learning Assistants & Graduate Teaching Assistants, Providing feedback

2018 Spring, *Lead Teaching Assistant, Center for Instructional Mentoring*, Du-
2017 Spring, ties: Observing Graduate Teaching Assistants for 'Calculus III' and
2016 Fall 'Differential equations', Providing feedback, One on one mentoring,
Conducting exam reviews for 'College Algebra'

2017 Summer *Overall coordinator for summer B*, Duties: Supervising instructors
teaching 100-level and 200-level courses, One on one mentoring for
a first time Graduate Teaching Assistant, Observations & feedback

2017 Spring, *Lead Teaching Assistant, Mathematics Learning Center*, Duties:
2016 Fall, Supervising the Mathematics Learning Center, Observing Under-
2016 Spring graduate and Graduate tutors

HONORS AND
AWARDS

IAS-INSA-NAS Summer Research Fellowship, May-July 2012, Granted by: Indian
Academy of Sciences, Indian National Science Academy, & The National Academy
of Sciences, India

INSPIRE Fellowship, August 2009-May 2014, Granted by: Department of Science
and Technology, Ministry of Science and Technology, India

ACADEMIC SERVICE

Graduate Student Representative, Graduate Studies Committee, Department of
Mathematics, Michigan State University, August 2018-present

Organizer, Graduate Student Geometry & Topology Seminar, Department of Math-
ematics, Michigan State University, Spring 2018

PROFESSIONAL
AFFILIATIONS

Member of the Association of Women in Mathematics, Student Chapter, Michigan
State University, February 2018 - present

Member of the American Mathematical Society, 2014- present

Member of the Mathematical Association of America, 2015-2016

REFERENCES

Jose A. Perea, Ph.D. Advisor

Department of Computational Mathematics, Science and Engineering, and De-
partment of Mathematics, Michigan State University

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