

# Huy Mai

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## CONTACT INFORMATION

University of Pennsylvania  
Department of Mathematics  
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## RESEARCH INTERESTS

Topological data analysis, Euler integral transform, and connection to sheaf theory.

## EDUCATION

### University of Pennsylvania

Ph.D. Candidate, Mathematics (expected May 2020)

- Advisor: Robert Ghrist

### Brandeis University

B.A. in Mathematics, B.S. in Computer Science, May 2015

- Honors in mathematics, summa cum laude

## PAPERS

Robert Ghrist, Rachel Levanger, Huy Mai, *Persistent Homology and Euler Integral Transforms*, in preparation (2018)

Shilad Sen, et al. (including Huy Mai), *Towards domain-specific semantic relatedness: a case study from geography*, Proceedings of the 24th International Conference on Artificial Intelligence (2015)

Gordon Rojas Kirby and Huy Mai, *The Frog Problem, limits and bounds in a probabilistic system*, Pennsylvania State University REU (2013)

## TALKS AND POSTERS

*Euler integral transform*, Graduate Student Seminar, University of Pennsylvania (2018)

*Euler integral transform and the Radon inversion formula*, Applied Topology Seminar, University of Pennsylvania (2018)

*Collapsing manifolds while keeping their curvature bounded*, Graduate Student Geometry-Topology Seminar, University of Pennsylvania (2017)

*Almost Flat Manifolds*, Graduate Student Geometry-Topology Seminar, University of Pennsylvania (2017)

*Stratified Morse Theory*, Applied Topology Seminar, University of Pennsylvania (2017)

*Towards domain-specific semantic relatedness: a case study from geography*, Poster, Joint Math Meetings (2015)

## TEACHING EXPERIENCE

Spring	2018	Teaching Assistant, Advanced Calculus II, Penn
Fall	2017	Teaching Assistant, Calculus II, Penn
Spring	2017	Grader, Mathematics in the Information Age, Penn
Fall,	2012–2015	Teaching Assistant, Calculus I, Brandeis
Spring		

HONORS AND AWARDS	2015	Arnold Schapiro Prize in Mathematics, Brandeis University
	2015	Computer Science Department's Prize, Brandeis University
	2011–2015	Dean's List, Brandeis University
	2011–2015	Wien International Scholarship, Brandeis University
	2011	Bronze Medal, Vietnam Mathematical Olympiad
	2010, 2011	Silver Medal, Hanoi Mathematical Olympiad
	2007	Gold Medal, Singapore Mathematical Olympiad
RESEARCH EXPERIENCE	2015 –	Applied Topology Advisor: Robert Ghrist, Department of Mathematics, University of Pennsylvania.
	Summer 2013	Bound for a stochastic and probabilistic system  Advisor: Misha Guysinski, Department of Mathematics, Pennsylvania State University.
	2014	Wikibrain: A survey on user's spatial perception and Wikipedia's inherent topology. Advisor: Shilad Sen Department of Mathematics and Computer Science, Macalester College. Research Mentor: Matthew Wright, Institute of Mathematics and its Applications, University of Minnesota, Twin Cities.
REFERENCES	<b>Robert Ghrist</b> , Andrea Mitchell PIK University Professor, University of Pennsylvania, <a href="mailto:ghrist@math.upenn.edu">ghrist@math.upenn.edu</a>	