

Yulan Qing

Curriculum Vitae

Appointments

- 2015– **Postdoctoral Fellowship**, *University of Toronto*.
- 2013–2015 **Postdoctoral Fellowship**, *Technion - Israel Institute of Technology*.

Research Interests

Boundaries at infinity of non-negatively curved spaces; Geometry of $\text{Out}(F_n)$ and the Outer space; geometry and dynamics of $\text{CAT}(0)$ spaces; Topology and geometry of discrete configuration spaces.

Education

- 2013 **Ph.D in Mathematics**, *Tufts University*.
Advisor: Kim Ruane, *Thesis: Boundaries of $\text{CAT}(0)$ Groups*.
- 2006 **Bachelor of Arts**, *Colorado College*.
Mathematics and Physics.
Magna Cum Laude, *Phi Beta Kappa*.

Awards

- 2012 MSRI/National Association of Math Circles Seed Grant
- 2010 Graduate Student Teaching Fellow at Tufts University
- 2006 Massachusetts Institute of Technology Presidential Fellow
- 2004 Tashjian-Crecelius Scholarship for Women in Science
- 2002 Colorado College International Student Full Scholarship Award (2002-2006)

Publications

- Accepted: **Quasi-geodesics in $\text{Out}(F_n)$ and their shadows in sub-factors**, with *Kasra Rafi*, *Journal of London Mathematical Society*.
- Published: **Uniform Fellow Traveling Between Surgery Paths in the Sphere Graph**, with *Matt Clay and Kasra Rafi*, *Algebraic & Geometric Topology* 17, 3751-3778, 2017.
- Actions of Right-Angled Coxeter Groups on the Croke-Kleiner Spaces**, *Geometriae Dedicata*, 185(1), 1-14, 2016.
- Geometry of Right-Angled Coxeter Groups on the Croke-Kleiner Spaces**, *Geometriae Dedicata*, 183(1), 113-122, 2016.
- Subspace Intersection Graphs**, with *Josh Laison*, *Discrete Math.* 310, no. 23, 3413–3416, 2010.
- Knight's Tours for Cubes and Boxes**, with *John Watkins*, *Congr. Numer.* 181, 41–48, 2006.
- Preprints: **Excursions of generic geodesics in right-angled Artin groups and graph products**, with *Giulio Tiozzo*, arXiv:1810.07891 [math.GT].
- Dilations of Outer Automorphisms of Right-angled Artin Groups**, with *Corey Bregman*.
- Convexity in the Outer Space**, with *Kasra Rafi*, arXiv:1708.04921 [math.GT].
- In preparation: **Sublinearly Contracting Boundary of $\text{CAT}(0)$ Space is QI -invariant**, with *Kasra Rafi*.

Teaching

2017-2019	Lecturer: First Year Seminars	<i>University of Toronto</i>
2017	Research Mentor: Mentorship Program	<i>University of Toronto</i>
2016	Course Coordinator: Linear Algebra	<i>University of Toronto</i>
2016	Lecturer: Multivariable Calculus	<i>University of Toronto</i>
2015	Lecturer: Linear Algebra	<i>University of Toronto</i>
2011-2013	Lecturer: Differential Equations	<i>Tufts University</i>
2011-2012	Instructor: Math Circle	<i>Harvard University</i>
2012	Instructor: Math Circle	<i>Tufts University</i>
2012	Director: Math Circle	<i>Tufts University</i>
2012	TA: RTG Summer Workshop	<i>UC Berkeley</i>
2011	Lecturer: Art of Problem Solving	<i>Lesley University</i>
2009-2010	TA: Webwork management for calculus series	<i>Tufts University</i>
2007-2008	TA: Probability and Random Variables	<i>MIT</i>
2007-2008	Research Mentor: RSI Summer Program	<i>MIT</i>

Conference Talks

- 2019 **Boundaries of random walks and applications** *Maine*
- 2019 **Redbud Topology Conference** *Oklahoma*

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2019	Arches topology Conference	<i>Utah</i>
2019	Spring Topology and Dynamical Systems Conference	<i>Alabama</i>
2018	Geometric Group Theory Conference	<i>China</i>
2018	Geometry of Outer Spaces and Outer Automorphism Groups	<i>UK</i>
2018	Spring Topology and Dynamical Systems Conference	<i>Alabama</i>
2017	Winter meeting of the Canadian Mathematical Society	<i>Canada</i>
2017	AMS Eastern Sectional Meeting	<i>New York</i>
2017	51st Spring Topology and Dynamical Systems Conference	<i>New York</i>
2016	Geometric Group Theory(Poster) at MSRI	<i>California</i>
2014	Geometric Structures And Representation Varieties	<i>Michigan</i>
2013	Exotic Geometric Structures Workshop(Poster) at ICERM	<i>Rhode Island</i>
2013	47th Spring Topology and Dynamics Conference	<i>Conneticut</i>
2013	Joint Meetings in Mathematics	<i>California</i>
2012	46th Spring Topology and Dynamics Conference	<i>Mexico</i>
2012	Joint Meetings in Mathematics	<i>Massachusetts</i>
2011	Graduate Conference in Algebra and Topology	<i>New York</i>

Invited Seminar Talks

2019	East China Normal University
2019	University of Illinois at Chicago
2018	Tufts University
2018	University of Chicago
2018	Temple University
2018	University of Waterloo
2018	CUNY Graduate Center
2018	McMaster University
2018	University of Buffalo
2018	McGill University
2017	University of Toronto
2016	University of Michigan
2015	GANITA seminar at University of Toronto
2014	Haifa University
2013	Fairfield University
2013	Wellesley College
2013	Boston College
2013	Brandeis University

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- 2013 CUNY Graduate Center
- 2012 Ohio State University
- 2012 HCSSiM prime-time lecture
- 2011 East China Normal University
- 2010 Colorado College

Conference Organizing

- June 2020 AIM workshops on Random Walks
- August 2018 Sage Days Workshop at the Fields Institute
- November 2018 Fields Medal Symposium 2018 in Honor of Maryam Mirzakhani

References

- Mladen Bestvina (University of Utah)
- Ruth Charney (Brandeis University)
- Camille Horbez (CNRS)
- Kasra Rafi (University of Toronto)
- Kim Ruane (Tufts University)
- Giulio Tiozzo (University of Toronto)
- Dror Bar-Natan (University of Toronto)

Citizenship

- US citizen