

Russell Ricks
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1. EDUCATION

Ph.D., Mathematics, University of Michigan, August 2015. Advisor: Ralf Spatzier.
M.S., Mathematics, Brigham Young University, April 2010. Thesis Title: Planar CAT(k) Subspaces.
B.S. (Summa Cum Laude), Mathematics, Brigham Young University, April 2008.

2. RESEARCH INTERESTS

Geometry and dynamics, especially for CAT(0) spaces.

3. PUBLICATIONS

Published

- “A rank rigidity result for CAT(0) spaces with one-dimensional Tits boundaries,” *Forum Mathematicum* (2019), <https://doi.org/10.1515/forum-2018-0133>.
- “Flat strips, Bowen-Margulis measures, and mixing of the geodesic flow for rank one CAT(0) spaces,” in *Ergodic Theory and Dynamical Systems* (2017), <https://doi.org/10.1017/etds.2015.78>.
- “LLL reduction and a conjecture of Gunnells,” with Darrin Doud, in *Proceedings of the American Mathematical Society* (2010), <https://doi.org/10.1090/S0002-9939-09-10131-4>.

Accepted

- “Asymptotic cones and boundaries of CAT(0) groups,” with Curtis Kent, to appear in *Indiana University Mathematics Journal*, <https://arxiv.org/abs/1805.06993>.
- “Boundary conditions detecting product splittings of CAT(0) spaces,” to appear in *Groups, Geometry & Dynamics*, <https://arxiv.org/abs/1804.06374>.

Submitted

- “The unique measure of maximal entropy for a compact rank one locally CAT(0) space,” <https://arxiv.org/abs/1906.06311>.
- “Counting closed geodesics in compact rank one locally CAT(0) spaces,” <https://arxiv.org/abs/1903.07635>.
- “Closed subsets of a CAT(0) 2-complex are intrinsically CAT(0),” <https://arxiv.org/abs/1909.00048>.
- “Planar CAT(k) subspaces,” <https://arxiv.org/abs/1001.2299>.
- “Extending a rigidity result of Lytchak,” <https://arxiv.org/abs/1912.06588>.

In Preparation

- “The intrinsic rank of nonwandering CAT(0) spaces,” with Pedro Ontaneda.
- “Some features of CAT(0) spaces that are detected by each and every asymptotic cone,” with Curtis Kent.

4. TEACHING EXPERIENCE

Binghamton University

- (Graduate) Algebraic Topology 2, Fall 2018.
- Topology 1, Fall 2018.
- Real Analysis 2, Spring 2018.
- Real Analysis 1, Fall 2017.
- Dynamical Systems, Fall 2016.
- Number Systems (Introduction to Proofs), Spring 2016–2019.
- Multivariable Calculus, Fall 2015 and Fall 2016.
- ODE's for Scientists/Engineers, Fall 2015 and Spring 2019.

University of Michigan

- Pre-Calculus (Accelerated Self-Study Pre-Calculus), Fall 2014. Held numerous office hours and wrote two quizzes each week. Also wrote midterm with another instructor.
- Differential Equations, Fall 2013. Led four discussion sections.
- Calculus 2, Winter 2012 and Fall 2012. Lectured and wrote weekly quizzes.
- Calculus 1, Winter 2011 and Fall 2011. Lectured and wrote weekly quizzes.
- Data, Functions and Graphs (Pre-Calculus), Fall 2010. Lectured and wrote weekly quizzes.

Brigham Young University

- Quantitative Reasoning (satisfies math GE credit only), three semesters. Lectured and wrote all exams.
- Calculus 2, one semester. Lectured and wrote midterm with two other instructors.
- Calculus 1, one semester. Led discussion section.
- Calculus for Business, two semesters. Led discussion section one semester, and independent study one summer.
- Math for Engineering 1 (Vector Calculus and some Linear Algebra). TAed one semester.

5. OTHER PROFESSIONAL ACTIVITIES

- Helped mentor beginning graduate students via the University of Michigan Student Geometry and Topology Seminar. Initiated re-focus of talks toward first-year students.
- Assisted with training new instructors at the University of Michigan.
- Co-organized unofficial student reading group on various topics in geometry, October 2011–January 2014, at the University of Michigan.