

Wouter Van Limbeek

Research Interests

Geometric topology, Lie groups and their discrete subgroups, differential geometry and geometric structures.

Employment

- 2018–present **Assistant Professor**, *University of Illinois – Chicago*.
2015–2018 **Donald J. Lewis Research Assistant Professor**, *University of Michigan – Ann Arbor*.

Education

- 2010–2015 **Ph.D.**, *University of Chicago*, Advisor: Benson Farb.
2011 **M.S.**, *University of Chicago*.
2007–2010 **B.Sc. Mathematics, B.Sc. Physics**, *Utrecht University*, The Netherlands.
Cum laude

Honors and Awards

- 2018–21 **NSF Research Grant**, *DMS-1811824*.
2017 **AMS-Simons Travel Grant**.
2015 **AMS Travel Grant for Graduate Students**.
2014 **GEAR Graduate Internship**.
2010 **Huygens Talent Scholarship**.
2008 **Young Talent Encouragement Award**.

Publications

- 9 **Rigidity of warped cones and coarse geometry of expanders.**
With David Fisher and Thang Nguyen (2017, 48 pages)
- 8 **Structure of normally and finitely non-co-Hopfian groups.**
(2017, 24 pages)
- 7 **The fundamental theorem of affine geometry for tori.**
With Jacob Shulkin
New York J. Math. (2017), vol. 23, 631–654
- 6 **Towers of regular self-covers and linear endomorphisms of tori.**
Geom. Topol., vol. 22 (2018), no. 4, 2427–2464
- 5 **Rigidity of convex divisible domains in flag manifolds.**
With Andrew Zimmer.
Geom. Topol., to appear (2015, 52 pages)

- 4 **Quasicircle boundaries and exotic almost-isometries.**
With Jean-François Lafont and Benjamin Schmidt
Ann. Inst. Fourier, vol. 67, no. 2 (2017), 863-877
- 3 **Symmetry gaps in Riemannian geometry and minimal orbifolds.**
J. Diff. Geom. (2017), vol. 105, no. 3, 487-517
- 2 **Isometry types of frame bundles.**
Pacific J. Math. (2016), vol. 285, no. 2, 393-426
- 1 **Riemannian manifolds with local symmetry.**
J. Topol. Anal. (2014), vol. 6, no. 2, 211-236

Invited Talks

Colloquia and conference talks

- 05/2018 **Workshop 'Approximation Properties in Operator Algebras and Ergodic Theory', IPAM.**
- 01/2018 **University of Cambridge, Department talk.**
- 01/2018 **ETH Zürich, Postdoc talk.**
- 01/2018 **Pennsylvania State University, Colloquium.**
- 12/2017 **University of Illinois at Chicago, Colloquium.**
- 11/2017 **Hyperbolic 3-Manifolds and Beyond, Virginia Topology Conference.**
- 10/2017 **No Boundaries: Groups in Algebra, Geometry, and Topology, University of Chicago.**
Lightning talk in honor of Benson Farb's 50th birthday.
- 05/2017 **Workshop 'Approximation, Deformation, Quasification', Newton Institute, Cambridge.**
- 04/2017 **Graduate Student Geometry and Topology Conference, Michigan State University.**
- 08/2016 **Reflections on Global Riemannian Geometry, Smoky Great Plains Geometry Conference.**
In honor of Karsten Grove's 70th birthday.
- 05/2016 **Midwest Topology Seminar, Ohio State University.**
- 04/2016 **Bloomington Geometry Workshop, Indiana University.**
- 03/2016 **Spring Topology and Dynamics Conference.**
Special session: 'Geometric Topology'
- 06/2015 **Workshop on Diffeomorphism Groups, University of California – Berkeley.**
- 03/2015 **AMS Central Sectional Meetings.**
Special session: 'Geometry of manifolds, singular spaces, and groups'
- 06/2013 **Workshop on Geometric Topology.**
- 10/2012 **AMS Central Sectional Meetings.**
Special session: 'Interactions between Geometry and Topology'

Seminars

- 10/2018 **Rice University, Geometry/Analysis Seminar.**
- 04/2018 **Temple University, Geometry and Topology Seminar.**
- 03/2018 **University of Notre Dame, USA, Felix Klein Seminar.**
- 02/2018 **University of Texas – Austin, Topology Seminar.**
- 02/2018 **City University of New York, Group Theory Seminar.**
- 02/2018 **Courant Institute, NYU, Geometric Analysis and Topology Seminar.**
- 12/2017 **University of Chicago, Geometry and Topology Seminar.**

- 06/2017 **Seoul National University (South Korea)**, *Geometry and Topology Seminar*.
- 06/2017 **KAIST (South Korea)**, *Topology Seminar*.
- 02/2017 **University of California – Berkeley**, *Topology Seminar*.
- 10/2016 **Penn State University**, *Dynamical Systems Seminar*.
- 03/2016 **University of Chicago**, *Geometry and Topology Seminar*.
- 12/2015 **Ohio State University**, *Geometric Group Theory Seminar*.
- 11/2015 **University of Michigan**, *Geometry Seminar*.
- 03/2015 **Rice University**, *Topology Seminar*.
- 11/2014 **Michigan State University**, *Geometry Seminar*.
- 09/2014 **University of Michigan**, *Geometry Seminar*.
- 09/2014 **Purdue University**, *Geometry and Topology Seminar*.
- 10/2013 **Ohio State University**, *Topology Seminar*.
- 09/2013 **University of Maryland**, *Geometry and Topology Seminar*.

Teaching Experience

Courses

- 2018 **University of Illinois at Chicago**.
 - Fall 2018: Introduction to Advanced Mathematics (Math 215)
- 2015–2017 **University of Michigan – Ann Arbor**.
 - Fall 2017: Linear Algebra (Math 217)
 - Winter 2017: Differential geometry (Math 635)
 - Fall 2016: Linear Algebra (Math 217)
 - Winter 2016: Differential geometry (Math 635)
 - Fall 2015: Calculus in one variable (Math 115)
- 2012-2015 **University of Chicago**.
 - 2014-2015: Multivariable Calculus and Linear Algebra (Math 195 and 196)
 - 2013-2014: Calculus in one variable (Math 153, 131, 132)
 - 2012-2013: Calculus in one variable (Math 131, 132, 133)

Advising

- 2016–2018 **Research Experience for Undergraduates Mentor**, University of Michigan.
Mentor for 4 undergraduate research projects.
- 2014 **Leadership Alliance Research Program Mentor**, University of Chicago.
Co-mentor for an undergraduate research project
- 2012-2013 **Directed Reading Program Mentor**, University of Chicago, 6 students.
- 2011-2013 **Research Experience for Undergraduates Mentor**, University of Chicago, 17 students.

Academic Service

- 2016-2018 **Topology Seminar Co-organizer**, University of Michigan.
- 2016-2018 **RTG Geometry/Topology/Dynamics Seminar Co-Organizer**, University of Michigan.
- Summer 2014 **Student reading group co-organizer**, University of Chicago,
Topic: *Entropy rigidity and bounded cohomology*.
- 2012-2013 **Student Geometry Seminar Co-organizer**, University of Chicago.
- 2010 **Dutch Interuniversity Mathematics Competition Co-Organizer**,
Utrecht, The Netherlands.

Referee for

Trans. Amer. Math. Soc., J. Topol. Anal., New York J. Math, and others.