

MICHAEL HULL

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RESEARCH INTERESTS

Geometric group theory and low-dimensional topology, especially hyperbolicity in group theory and related graphs, surfaces, and 3-manifolds.

EMPLOYMENT

Post-Doctoral Associate *August 2016-Present*
University of Florida

Research Assistant Professor *August 2013-May 2016*
University of Illinois at Chicago

EDUCATION

Ph.D. in Mathematics *May 2013*

Advisor: Denis Osin
Vanderbilt University, Nashville, TN

B.S. in Mathematics graduated *Summa Cum Laude* *May 2008*
Furman University, Greenville, SC

GRANTS

AMS-Simons travel grant, AMS and the Simons Foundation. *June 2015*

PUBLISHED AND ACCEPTED PAPERS

10. D. Groves, M. Hull, *Homomorphisms to acylindrically hyperbolic groups I: Equationally noetherian groups and families*, arXiv:1704.03491, to appear in Trans. Amer. Math. Soc.
9. A. Dranishnikov, M. Hull, *A finitely generated group that does not satisfy the Burghalea Conjecture*, arXiv:1701.03165, to appear in Topology Proc.
8. M. Hull, I. Kapovich, *Counting Conjugacy Classes in $Out(F_N)$* , Bull. Aust. Math. Soc. **97** (2018), no. 3, 412-421.
7. D. Groves, M. Hull, *Abelian splittings of right-angled Artin groups*, Hyperbolic geometry and geometric group theory, 159-165, Adv. Stud. Pure Math., **73**, Math. Soc. Japan, Tokyo, 2017.
6. M. Hull, D. Osin, *Transitivity degrees of countable groups and acylindrical hyperbolicity*, Israel. J. Math. **216** (2016), 307-353.
5. R. Coulon, M. Hull, C. Kent, *A Cartan-Hadamard type result for relatively hyperbolic groups*, Geom. Dedicata **180** (2016), 339-371.
4. M. Hull, *Small cancellation in acylindrically hyperbolic groups*, Groups, Geom., & Dynam. **10** (2016), no. 4, 1077-1119.
3. M. Hull, D. Osin, *Induced quasi-cocycles on groups with hyperbolically embedded subgroups*. Alg. Geom. Topology. **13** (2013), 2635-2665.
2. M. Hull, D. Osin, *Conjugacy growth of finitely generated groups*. Adv. Math. **235** (2013), 361-389.
Corrigendum to "Conjugacy growth of finitely generated groups" Adv. Math. (2015), 10.1016/j.aim.2015.07.014.
1. M. Hull, *Conjugacy growth in polycyclic groups*. Arch. Math. **96** (2011), no. 2, 131-134.

TEACHING EXPERIENCE

Post-Doctoral Associate, University of Florida.

August 2016-Present

Instructor for:

- Analytic Geometry and Calculus 1 (MAC 2311).
- Elementary Differential Equations (MAP 2302).
- Sets and Logic (MHF 3202).
- Linear Algebra 1 (MAS 4105).
- Geometry (MTG 3212).
- Introduction to Advanced Calculus for Engineers and Physical Scientists 1 (MAA 4102).
- Introduction to Advanced Calculus for Engineers and Physical Scientists 2 (MAA 4103).
- Advanced Topics in Topology: Introduction to Geometric Group Theory (MAT 6932).

Research Assistant Professor, University of Illinois at Chicago.

August 2013-May 2016

Instructor for:

- Calculus I (MATH 180).
- Calculus III (MATH 210).
- Linear Algebra (MATH 320).
- Topology (MATH 445).
- Abstract Algebra I (MATH 330).
- Abstract Algebra II (MATH 431).
- Abstract Algebra (MTH 435) (For math education majors and masters students).
- Advanced Topics in Geometric and Differential Topology: Hyperbolic Groups (MATH 569).
- Independent study on Group Theory and Rubik's Cubes (MATH 469).

Graduate Student Teaching Assistant, Vanderbilt University.

Fall 2008 - Spring 2013

Instructor for:

- Calculus I (MATH 155A and MATH 150A).
- Statistics computer lab (MATH 218L).
- Math Review ELC: SABIC (A pre-calculus summer course for foreign students preparing to attend college in the U.S.).

TA for:

- Calculus I & II (MATH 150A and MATH 150B).

CONFERENCE AND SEMINAR TALKS

Maps between 3-manifolds

April 2019

Arches Topology Conference, Hurricane, Utah.

Counting conjugacy classes in $Out(F_n)$

March 2018

Spring Topology and Dynamics Conference, Auburn University.

Equationally noetherian groups and families

September 2017

Topology and Geometric Group Theory Seminar, Cornell University.

Equationally noetherian groups and families

June 2017

Groups and Computation, Stevens Institute of Technology.

Highly transitive groups

May 2017

Zassenhaus Groups and Friends Conference, Binghamton University.

Abelian splittings of right-angled Artin groups

February 2017

FSU/UF Joint Topology and Dynamics Meetings, University of Florida.

<i>Homomorphisms to acylindrically hyperbolic groups</i> Beyond Hyperbolicity, University of Cambridge.	June 2016
<i>Highly transitive groups</i> Young Geometric Group Theory V, Karlsruhe, Germany.	February 2016
<i>Homomorphisms to acylindrically hyperbolic groups</i> Topology Seminar, University of Michigan.	November 2015
<i>Acylindrically hyperbolic groups</i> Geometry/Topology Seminar, University of Chicago.	June 2015
<i>Abelian splittings of right-angled Artin groups</i> Spring Topology and Dynamics Conference, Bowling Green State University.	May 2015
<i>Acylindrically hyperbolic groups</i> Geometry and Topology Seminar, University of Wisconsin.	April 2015
<i>Acylindrically hyperbolic groups</i> Geometry & Topology Seminar, Yale University.	November 2014
<i>Multiply transitive actions of countable groups</i> Colloquium, Bowling Green State University.	October 2014
<i>Acylindrically hyperbolic groups and small cancellation quotients</i> Geometry, Groups and Dynamics/GEAR Seminar, University of Illinois at Urbana-Champaign.	September 2014
<i>Conjugacy growth in groups</i> Growth in Groups 2014, Neuchâtel, Switzerland.	June 2014
<i>Acylindrically hyperbolic groups</i> Topological Methods in Group Theory, Columbus, Ohio.	June 2014
<i>Acylindrically hyperbolic groups</i> Geometry & Topology Seminar, University of Toronto.	March 2014
<i>Acylindrically hyperbolic groups</i> Special Session on Geometric Group Theory, AMS-MAA Joint Mathematics Meetings, Baltimore, Maryland.	January 2014
<i>Conjugacy growth in finitely generated groups</i> Special Session on Algorithmic Problems of Group Theory and Their Complexity, AMS-MAA Joint Mathematics Meetings, San Diego, California.	January 2013
<i>Conjugacy growth in finitely generated groups</i> Geometric and Asymptotic Group Theory with Applications 5, Barcelona, Spain.	July 2011

AWARDS

B.F. Bryant Prize for Excellence in Teaching, Vanderbilt University.	May 2013
Graduate student travel grant, AMS.	January 2013
Graduate student travel grant, Vanderbilt University.	July 2011
Delany Medal in Mathematics, Furman University.	May 2008
Mathematics Faculty Award for Excellence, Furman University.	May 2008
Phi Beta Kappa, Furman University.	May 2008
Pi Mu Epsilon, Furman University.	May 2007
Phi Eta Sigma, Furman University.	May 2005

SERVICE

Organizer, <i>Special Session on Boundaries and Non-positive Curvature in Group Theory</i> , AMS Spring Southeastern Sectional Meeting, Nashville, Tennessee.	April 2018
Program Committee Member, South Eastern Logic Symposium, University of Florida.	March 2017

Organizer, Geometry, Topology and Dynamics Seminar, University of Illinois at Chicago.	<i>August 2014-May 2016</i>
Oral Competition Judge, ICTM Regional High School Math Contest, University of Illinois at Chicago.	<i>February 2015</i>
Judge, QED: Chicago's Youth Math Symposium, Walter Payton College Preparatory High School.	<i>December 2014</i>
Speaker, Payton Citywide Math Circle, Walter Payton College Preparatory High School.	<i>November 2013 & November 2014</i>
Organizer, Topology and Group Theory Seminar, Vanderbilt University.	<i>August 2012-May 2013</i>
Organizer and Speaker, Undergraduate Seminar in Mathematics, Vanderbilt University.	<i>August 2009-May 2013</i>
Organizer, <i>Special Session on Asymptotic Group Theory</i> , AMS Spring Western Sectional Meeting, Honolulu, Hawaii.	<i>March 2012</i>
Reviewer for MathSciNet.	<i>June 2017-Present</i>
Referee for:	<i>August 2013-Present</i>
<ul style="list-style-type: none"> • <i>Algebraic & Geometric Topology.</i> • <i>Annals of Combinatorics.</i> • <i>Geometry & Topology.</i> • <i>Groups, Geometry and Dynamics.</i> • <i>Glasgow Mathematical Journal.</i> • <i>International Journal of Algebra and Computation.</i> • <i>Journal of Algebra.</i> • <i>Mathematica Slovaca.</i> • <i>Mathematische Zeitschrift.</i> • <i>Proceedings of the American Mathematical Society.</i> • <i>Proceedings of the London Mathematical Society.</i> 	