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**CITIZENSHIP** Born March 6, 1976. U.S. Citizen.

### **POSITIONS**

- Assistant Professor (postdoctoral position), U of Utah, 2003–present.

### **EDUCATION**

- Ph.D. in Mathematics, U of Chicago, June 2003.  
Thesis Advisor: Benson Farb.
- M.S. in Mathematics, U of Chicago, March 2000.
- Sc.B. in Mathematics, Brown University, May 1998.  
Magna Cum Laude, Phi Beta Kappa.

### **RESEARCH INTERESTS**

- Geometric group theory
- Low-dimensional geometry/topology

### **AWARDS AND FELLOWSHIPS**

- National Science Foundation grant, September 2007–September 2010.
- Outstanding Instructorship Award, April 2007.
- Professeur Invité, U de Bourgogne, June–July 2006.
- National Science Foundation VIGRE Postdoctoral Fellowship, 2007–2008.
- National Science Foundation Postdoctoral Fellowship, 2004–2007.
- National Science Foundation VIGRE Postdoctoral Fellowship, 2003–2004.
- Lawrence and Josephine Graves Teaching Prize, 2002.
- David Howell Premium for Excellence in Mathematics, 1998.
- Henry Parker Manning Prize, 1998.

**PAPERS** (available at <http://www.math.utah.edu/~margalit>)

Published and accepted

1. Dimension of the Torelli group for  $\text{Out}(F_n)$ , with Mladen Bestvina and Kai-Uwe Bux, *Inventiones Mathematicae* 170 (2007), no. 1, 1–32.
2. The lower central series and pseudo-Anosov dilatations, with Benson Farb and Christopher J. Leininger, to appear in *The American Journal of Mathematics*.
3. Commensurations of the Johnson kernel, with Tara E. Brendle, *Geometry and Topology* 8: 1361-1384, 2004.
4. Automorphisms of the pants complex, *Duke Mathematical Journal* 121(3): 457-479, 2004.

5. Injections of Artin groups, with Robert W. Bell, *Commentarii Mathematici Helvetici*, 82 (2007), 725–751.
6. Abstract commensurators of braid groups, with Christopher J. Leininger, *Journal of Algebra* 299 (2): 447-455, 2006.
7. Braid groups and the co-Hopfian property, with Robert W. Bell, *Journal of Algebra* 303: 275-294, 2006.
8. Addendum to: Commensurations of the Johnson kernel, with Tara E. Brendle, to appear in *Geometry and Topology*.
9. Geometric presentations for the pure braid group, with Jon McCammond, to appear in *Journal of Knot Theory and Its Ramifications*.
10. A homological recipe for pseudo-Anosovs, with Steven Spallone, *Mathematical Research Letters* 14 (2007), no. 5, 853–863.
11. Weil–Petersson isometries via the pants complex, with Jeffrey F. Brock, *Proceedings of the AMS* 135 (2007), 795-803.
12. Curve complexes and finite index subgroups of mapping class groups, with Jason Behrstock, *Geometriae Dedicata* 118(1): 71-85, 2006.
13. A lantern lemma, *Algebraic and Geometric Topology* 2: 1179-1195, 2002.
14. Geometry versus algebra in the mapping class group, *Ph.D. thesis*, University of Chicago, 2003.

#### Submitted

15. The dimension of the Torelli group, with Mladen Bestvina and Kai-Uwe Bux.

#### In preparation

16. Finiteness properties of the symmetric Torelli group, with Tara E. Brendle, in preparation.
17. A surgical proof of the contractibility of the complex of minimizin cycles, with Mladen Bestvina and Kai-Uwe Bux, in preparation.
18. Multitwists in the Johnson filtration, with Mladen Bestvina and Kai-Uwe Bux, in preparation.
19. Linking and the Brouwer and Borsuk–Ulam Theorems, with Thomas Banchoff, in preparation.

#### Books

20. A primer on mapping class groups, with Benson Farb, 275 pages, in preparation. <http://www.math.utah.edu/~margalit/primer>
21. Thurston’s work on surfaces, with Djun Kim. English translation of “Travaux de Thurston sur les surfaces,” edited by A. Fathi, F. Laudenbach, and V. Poénaru. Available upon request.

## MATHEMATICAL REVIEWS

1. Failure of separation by quasi-homomorphisms in mapping class groups, by H. Endo and D. Kotschick.
2. Isomorphisms of fiber spaces over Teichmüller spaces, by Yun Hu and Yuliang Shen.
3. The metric space of geodesic laminations on a surface II, by Francis Bonahon and Xiaodong Zhu.
4. A reflexive representation of braid groups, by H. Zheng.
5. Involutions in mapping class groups of non-orientable surfaces, by Błażej Szepietowski.
6. The metric space of geodesic laminations on a surface I, by Francis Bonahon and Xiaodong Zhu.
7. On the singular braid monoid of an orientable surface, by Jerónimo Díaz-Cantos, Juan González-Meneses, and José M. Tornero.

## PROFESSIONAL ACTIVITIES

### Research

- Co-organizer, Max Dehn Seminar at U of Utah, 2003–present.
- Co-organizer, Student seminar on low-dimensional topology, 2000–3.
- Referee for: Algebraic and Geometric Topology, Commentarii Mathematici Helvetici, Geometriae Dedicata, Geometric and Functional Analysis, Geometry and Topology, Topology and Its Applications, Transactions of the American Mathematical Society, Groups, Geometry, and Dynamics, New York Journal of Mathematics.
- Member, AMS and MAA, 1998–present.

### Educational/Departmental

- Undergraduate thesis advisor, 2007.
- Undergraduate Research Opportunities Program advisor, 2007.
- Advisor for Undergraduate Problem Solving Contest, 2004–6.
- Math Circle program for Utah high school students, 2003–4.
- Polk Bros./U of Chicago program for Chicago Public Schools, 2002–3.
- CNA Mathachievement program for Chicago Public Schools, 2002–3.
- SESAME program for Chicago Public Schools teachers, 2002–3.
- Mentor, Directed Reading Program, 2002.
- Academic Partner to Orr High School, 2001.
- Chair, Graduate Student Advisory Committee, 1999–2000.

## INVITED CONFERENCE TALKS

- Workshop on Torelli groups, CTQM, Aarhus, March 2008.
- Topics in Geometric Group Theory, MSRI, November 2007.

- Wasatch Topology Conference, U of Utah, August 2007.
- Braids in Singapore, National U of Singapore, June 2007.
- The Many Strands of the Braid Groups, BIRS, April 2007.
- Mapping Class Groups and Handlebodies, Joint Mathematics Meetings, New Orleans, January 2007.
- Low-dimensional Topology and Geometry, AMS meeting, U of Utah, October 2006.
- Torelli groups workshop, Chicago, August 2006.
- Conference on Geometric Group Theory, CRM, Montreal, July 2006.
- Journées Peter Shalen, CRM, Montreal, June 2006.
- Barrett Lectures, U of Tennessee, April 2006.
- Bay Area Topology Seminar, UC Davis, April 2006.
- Spring Topology and Dynamical Systems Conference, UNC Greensboro, March 2006.
- Ahlfors–Bers Colloquium, U of Michigan, May 2005.
- Curvature in Group Theory and Combinatorics, AMS meeting, UC Santa Barbara, April 2005.
- Braids, Links, and Mapping Class Groups: A Conference In Honor of Joan Birman, Columbia U, March 2005.
- Dynamics of Mapping Class Groups on Moduli Spaces, Joint Mathematics Meetings, Atlanta, January 2005.
- Braid groups, BIRS, October 2004.
- Albany Group Theory Conference, October 2004.
- Combinatorial Topology in Mapping Class Groups, U of Chicago, April 2004.
- Group Cohomology in Algebra and Geometry, AMS meeting, U of North Carolina, October 2003.
- Albany Group Theory Conference, October 2003.
- Georgia Topology Conference, June 2003.
- Mapping Class Groups and Geometry of Moduli Space, AMS meeting, U of Michigan, March 2002.

#### **INVITED SEMINAR TALKS**

- 2007: Johns Hopkins, Utah, Virginia, Georgia.
- 2006: Rutgers (Colloquium), Davis, Technion, Stony Brook, Utah, U Chicago.
- 2005: Urbana–Champaign, Utah (three times), Cornell, Rutgers, Ohio State, Brigham Young, Santa Barbara, UIC.
- 2004: Columbia (twice), Brown, Idaho State (Colloquium), Cornell (twice), Utah (twice), U Chicago, Northwestern, UIC, Rutgers.