

# Andrew Putman

Curriculum Vitae  
Oct. 2009

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**Research Interests :** Mapping class groups, low-dimensional topology, geometric group theory

## Education

- 2007        **University of Chicago**, Chicago, IL  
              Ph.D. in Mathematics (advisor : Benson Farb)
- 2002        **Rice University**, Houston, TX  
              B.A. in Mathematics

## Employment

- 2007-present    **Massachusetts Institute of Technology**, Cambridge, MA  
                  C. L. E. Moore Instructor
- 2007 (Fall)     **Mathematical Sciences Research Institute**, Berkeley, CA  
                  Postdoctoral fellow

## Awards and Grants

- 2007        NSF Postdoctoral Fellowship (declined)
- 2007        Finalist for the AIM 5-year fellowship
- 2002-2004    McCormick Fellowship (from the University of Chicago)

## Published Papers

1. *Cutting and pasting in the Torelli group*  
Geom. Topol. 11 (2007), 829–865.
2. *An infinite presentation of the Torelli group*  
Geom. Funct. Anal. 19 (2009), no. 2, 591–643.
3. *Irreducible  $Sp$ -representations and subgroup distortion in the mapping class group* (w/ N. Broaddus & B. Farb)  
to appear in Comment. Math. Helv.
4. *On the self-intersections of curves deep in the lower central series of a surface group* (w/ J. Malestein)  
to appear in Geom. Dedicata.
5. *A note on the abelianizations of finite-index subgroups of the mapping class group*  
to appear in Proc. Amer. Math. Soc.
6. *Symplectic Heegaard splittings and linked abelian groups* (w/ J. Birman & D. Johnson)  
in *Groups of Diffeomorphisms*, Adv. Stud. Pure Math., 52, Math. Soc. Japan, Tokyo, 135–220.
7. *The Casson invariant and the word metric on the Torelli group* (w/ N. Broaddus & B. Farb)  
C. R. Math. Acad. Sci. Paris 345 (2007), no. 8, 449–452.
8. *A note on the connectivity of certain complexes associated to surfaces*  
Enseign. Math. (2) 54 (2008), no. 3-4, 287–301.

9. *The rationality of sol manifolds*  
J. Algebra 304 (2006), no. 1, 190–215.

**Submitted Papers**

1. *The Picard group of the moduli space of curves with level structures*  
2009 preprint.
2. *Abelian covers of surfaces and the homology of the level  $L$  mapping class group*  
2009 preprint.
3. *The Johnson homomorphism and its kernel*  
2009 preprint.
4. *Obtaining presentations from group actions without making choices*  
2009 preprint.
5. *The second rational homology group of the moduli space of curves with level structures*  
2008 preprint.
6. *The abelianization of the level  $L$  mapping class group*  
2008 preprint.

**Papers in Preparation**

1. *The abelianization of the Torelli group*  
in preparation.
2. *A curve complex and Birman exact sequence for  $\text{Aut}(F_n)$*  (w/ M. Day)  
in preparation.

**Invited Talks**

- 04.2010 Special Session, Topics in Geometric Group Theory, AMS Sectional Meeting
- 12.2009 University of Chicago Geometry/Topology Seminar
- 10.2009 Michigan State University Topology Seminar
- 09.2009 MIT Geometry Seminar
- 04.2009 Columbia Geometric Topology Seminar
- 04.2009 Tufts Geometric Group Theory Seminar
- 01.2009 Duke Geometry/Topology Seminar
- 12.2008 Caltech Geometry and Topology Seminar
- 11.2008 Workshop on Geometry and Topology of Mapping Class Groups, Akita (two talks)
- 11.2008 University of Tokyo Topology Seminar
- 10.2008 Brown Geometry and Topology Seminar
- 10.2008 Tufts Geometric Group Theory Seminar
- 10.2008 Special Session, Low-Dimensional Topology, AMS Sectional Meeting
- 06.2008 Rice Colloquium
- 03.2008 Finite Type Invariants, Fat Graphs and Torelli-Johnson-Morita Theory, CTQM
- 03.2008 CTQM Master Class on the Torelli group (twenty 45 minute lectures)
- 02.2008 Tufts Geometric Group Theory Seminar
- 11.2007 Topics in Geometric Group Theory, MSRI
- 03.2007 Columbia Geometric Topology Seminar
- 03.2007 Yale Topology/Geometry Seminar
- 02.2007 Cornell Topology and Geometric Group Theory Seminar
- 01.2007 Special Session, Mapping Class Groups and Handlebodies, AMS Joint Meeting

- 10.2006 Special Session, Low Dimensional Topology and Geometry, AMS Sectional Meeting
- 07.2006 Torelli Group Workshop
- 02.2005 Georgia Tech Geometry and Topology Seminar

**Teaching**

MIT

- 2010, Spring 18.904 : Seminar in Topology
- 2009, Fall 18.700 : Linear Algebra
- 2009, Spring 18.901 : Introduction to Topology
- 2008, Fall 18.02 : Calculus (Recitation Instructor)
- 2008, Spring 18.03 : Differential Equations (Recitation Instructor)

University of Chicago

- 2006-2007 Math 195/6 : Math Methods for Biological/Social Sciences I/II (Instructor)
- 2005-2006 Math 131/2/3 : Elementary Functions and Calculus I/II/III (Instructor)
- 2004-2005 Math 131 : Elementary Functions and Calculus I (Instructor)
- 2003-2004 Math 270/3/4 : Complex Analysis, Diff Equations, Diff Manifolds (TA)