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(Maiden name: Jessica A. Shepherd)

Employment

Postdoctoral Researcher, University of Oxford mathematical institute, Sep 2007 to present.

Assistant Professor, Brigham Young University, June 2007 to present.

Instructor, University of Texas at Austin, 2006 – 2007.

VIGRE Postdoctoral Instructor, University of Texas at Austin, 2004 – 2006.

Education

Stanford University, Stanford, California, Ph.D. in Mathematics, June 2004.
Dissertation: *Cusp shapes of hyperbolic link complements and Dehn filling.*
Advisor: Steven Kerckhoff.

University of Michigan, Ann Arbor, Michigan, M.S. in Mathematics, May 1999.

University of Utah, Salt Lake City, Utah, B.A. *summa cum laude* in Mathematics, minor in Computer Science, June 1998.

Publications

(with D. Futer) Links with no exceptional surgeries, *Commentarii Mathematici Helvetici*, Vol. 82, No. 3, (2007), pp. 629–664.
arXiv:math.GT/0412307

Volumes of highly twisted knots and links. *Algebraic and Geometric Topology*, Vol. 7 (2007), pp. 93-108.
arXiv:math.GT/0604476

(with D. Futer and E. Kalfagianni) Volumes, filling, and the Jones polynomial, *Journal of Differential Geometry*, Vol. 78, No. 3, (2008), pp. 429–464.
arXiv:math.GT/0612138

Cusp shapes under cone deformation. Submitted for publication.
arXiv:math.GT/0410233

Augmenting, reflecting, and twisting: geometry of link complements in 3–manifolds. Submitted for publication.
arXiv:math.GT/0709.2919

Slope lengths and generalized augmented links. Submitted for publication.
arXiv:math.GT/0703638

(with D. Futer and E. Kalfagianni) Symmetric links and Conway sums: volume and Jones polynomial. Submitted for publication.
arXiv:arXiv:0804.1542

(with E. Riloff) A Corpus-Based Bootstrapping Algorithm for Semi-Automated Semantic Lexicon Construction, *Journal of Natural Language Engineering*, 1999, Vol. 5, No. 2, pp. 147-156.

(with E. Riloff) A Corpus-Based Approach for Building Semantic Lexicons, *Proceedings of the Second Conference on Empirical Methods in Natural Language Processing (EMNLP-2)*.

Publications in Preparation

(with D. Futer and E. Kalfagianni) Cusp shapes of Farey manifolds.

Selected Awards

NSF Grant, award DMS-0704359, 2007-2010.

NSF VIGRE Postdoctoral Fellowship, University of Texas at Austin, 2004-2006.

Centennial Teaching Award, Stanford University, 2003.

ARCS Foundation Graduate Fellowship, 2002-2003.

NSF Graduate Fellowship, 1998-2001.

Alice Schafer Prize, from the Association for Women in Mathematics, 1998.

Barry Goldwater Scholarship, 1997-1998.

Thomas Andrew Hurd Mathematics Scholarship, from the University of Utah Mathematics Department, 1998.

Phi Beta Kappa, 1997.

J.L. Gibson Award, from the University of Utah Mathematics Department, 1996.

Kennecott scholarship, 1996-1997.

Academic Presentations

Seminar and colloquium talks

Warwick University topology seminar. Mar. 2008.
University of Oxford topology seminar. Jan. 2008.
University of Liverpool colloquium. Nov. 2007.

Columbia University topology seminar. May 2007.
Rice University topology seminar. Apr. 2007.
Vassar College mathematics colloquium. Feb. 2007.
University of Oklahoma. Feb. 2007.
Brigham Young University topology seminar and colloquium. Jan. 2007.
University of Texas at Austin topology seminar. Dec. 2006.
Michigan State University topology seminar. Oct. 2006.
Stanford University topology seminar. May 2006.
University of Texas at Austin topology seminar. Feb. 2005.
University of California, Berkeley topology seminar. Mar. 2004.
University of Texas at Austin topology seminar. Feb. 2004.
University of Utah topology seminar. Jan. 2004.
Stanford University topology seminar. Jan. 2004.

Conference talks

Wasatch Topology Conference, University of Utah, Salt Lake City. Aug. 2007.

Workshop on 3–manifold geometry and topology, Warwick Mathematics Institute, University of Warwick, Coventry, England. Jul. 2007.

A second time around the volume conjecture, Louisiana State University, Baton Rouge. June 2007.

Cascade Topology Seminar, Portland State University. Oct. 2006.

Workshop on the deformation theory of hyperbolic 3–manifolds, Ahlfors-Bers Colloquium, University of Michigan, Ann Arbor. May 2005.

Special session on low–dimensional topology and Kleinian groups, AMS sectional meeting, Northwestern University. Oct. 2004.

Special session on the geometry of hyperbolic manifolds, AMS sectional meeting, Vanderbilt University. Oct. 2004.

2004 Georgia Topology Conference, University of Georgia at Athens. Aug. 2004.

General Audience Outreach Presentations

"Geometry out of the Paper: An Introduction to Manifolds", Saturday Morning Math Group, University of Texas at Austin. Sep. 2006.

Other

Poster presentation, *"The shape of cusps of hyperbolic knot complements"*, Spaces of Kleinian groups and hyperbolic 3–manifolds, Isaac Newton Institute Workshop, Cambridge, UK. Aug. 2003.

Teaching

Instructor, University of Texas at Austin

Single variable calculus (Fall 2005, Fall 2006), Multivariable calculus (Spring 2005), Linear algebra (Spring 2007), Probability (Fall 2004), Discrete math (Spring 2006, Fall 2006). Graduate topics course: Hyperbolic geometry (Spring 2007).

Graduate Student Instructor, Stanford University.
Single variable calculus (Summer 2002, Winter 2004).

Teaching Assistant, Stanford University.
Multivariable calculus (Fall 2001, Fall 2002, Fall 2003).

Service

Teaching Consultant, Stanford Center for Teaching and Learning, 2003-2004.
Facilitated small–group teaching evaluations and practice teaching sessions for graduate students from all departments. Held two TA training sessions on office hours.

Teaching Liaison, Stanford Center for Teaching and Learning, 2002-2003.
Helped guide math graduate students to teaching events and resources available.

Organizer, Teaching lunch seminars, Stanford mathematics department, 2002-2003.
Seminars addressed ideas for better teaching of mathematics on a university level.

Referee. *Geometry and Topology Monographs, Geometriae Dedicata.*