

Curriculum Vita

California Institute of Technology
Department of Mathematics
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Personal

Born February 23rd, 1976 in Dallas, Texas

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Education

University of Texas in Austin. Ph.D., May 2006. Advisor: Alan W. Reid.

University of Texas in Arlington. B.S., May 2000. (1st in class).

Appointments

Dickson instructor, University of Chicago, 2007–2010.

Taussky-Todd instructor, California Institute of Technology, 2006–2007

University of Texas in Austin assistant instructor, Fall 2005

University of Texas in Austin teaching assistant, Fall 2000-Summer 2003

Awards and Honors

Clay Mathematics Institute *Lift-off fellowship*, Summer 2006.

UT Austin *Continuing education fellowship*, 2004-2005

UT Austin *V.I.G.R.E. fellowship*, 2003-2004

UT Austin *Departmental fellowship*, Summer 2001

UT Arlington *Outstanding senior math major*, 2000

UT Arlington *Continuing education scholarship*, 1999-2000

UT Arlington *Outstanding junior math major*, 1999

Visiting positions

Tokyo Metropolitan University, December 2006. Hosted by Yoshi Kamishima

Tokyo Metropolitan University, January 2006. Hosted by Yoshi Kamishima

University of Chicago, July 2005 and November 2005. Hosted by Benson Farb

University of Maryland, February-March 2005. Hosted by Richard E. Schwartz

Durham University, July 2004. Hosted by John Parker

Invited lectures, conferences, and colloquia

Topology, Complex Analysis and Arithmetic of Hyperbolic Spaces, Kyoto, Japan (3 hours, December 2006).

AMS Complex geometry special session, Salt Lake City, Utah (40 minutes, October 2006).

Mapping class groups: Torelli-fest, Chicago, Illinois (45 minutes, August 2006).

Mathematical Institute of Gdansk University workshop, Gdansk, Poland (June 2006).

Tokyo Metropolitan University colloquium, Tokyo, Japan (1 hour, January 2006)

Osaka City University colloquium, Osaka, Japan (1 hour, January 2006)

Wasatch Topology Conference, Park City, Utah (1 hour, December 2005)

Crystallographic groups and their generalization, IV, Oostende, Belgium (25 minutes, June 2005)

Géométrie hyperbolique complexe, Luminy, France (1 hour, July 2003)

Seminar talks (past and future)

University of Oklahoma Topology (Spring 2007)

Boston College Topology (Spring 2007)

Tufts Topology (Spring 2007)

SUNY Buffalo Topology (Spring 2007)

Stanford University Topology (Spring 2007)

University of Utah Max Dehn Seminar (Spring 2007)

University of Michigan Lie Groups (Spring 2007)

Tokyo Metropolitan University Topology (Fall 2006)

Tokyo Institute of Technology Topology (Fall 2006)

University of California Santa Barbara Topology (Fall 2006)

Brown University Geometry (Fall 2006)

University of Southern California Topology (Fall 2006)

University of Illinois at Urbana-Champaign Geometry (Fall 2006)

California Institute of Technology Geometry (Spring 2006)

University of Texas in Arlington GAGA (Spring 2006)

University of Texas in Arlington AGANT (Spring 2006)
Louisiana State University Geometry (Spring 2006)
Osaka City University Complex Dynamics (Spring 2006)
University of Illinois at Urbana-Champaign Group Theory (Fall 2005)
University of Chicago Topology/Geometry (Spring 2005, Fall 2006)
University of Illinois at Chicago Topology (Spring 2005)
University of Maryland Geometry (2 talks Spring 2005)
University of Texas Algebra (2 talks Spring 2005)
Columbia University Topology (Fall 2004)
University of Texas Topology (Fall 2003, Fall 2004, Fall 2005, Spring 2006, Fall 2006)
University of Texas Analysis (Fall 2002)

Teaching

Invited speaker for College of Natural Science TA orientation, 2003
Department of Mathematics award for undergraduate teaching, 2002
Office of Graduate Studies, *Outstanding Teaching Assistant* Nomination, 2002

Miscellaneous

Coorganizer (w/ Jeff Brock) of the conference *Tameness in Texas*, June 2004
Junior topology seminar organizer, 2003-2004
Junior Lie theory seminar organizer, 2003
Referee for *Geometriae Dedicata*, *LMS Bulletin*, *Proc. Symp. Pure and Applied Math.*
Reviewer for *Zentralblatt Math.*

Mathematical Writing

Copies can be found at <http://www.its.caltech.edu/~dmcreyn/downloads.html>

In preparation/progress

- 15 (w/ L. Paris). *Residual properties of mapping class groups*, in preparation/progress.
- 14 (w/ A. W. Reid). *The genus spectrum of hyperbolic 3-manifolds*, in preparation/progress.
- 13 (w/ R. Gornet). *The simple length spectrum is unbounded*, in preparation/progress.
- 12 (w/ Y. Kamishima). *Symmetries of flat manifolds*, in preparation/progress.
- 11 (w/ A. W. Reid). *Locally symmetric manifolds and simple geodesics*, in preparation/progress.
- 10 *Finite subgroups of lattices and a finite cyclic property*, in preparation.
- 9 *Geodesic submanifolds of rank-1 arithmetic manifolds*, in preparation.

Preprints

8 *Arithmetic lattices in $SU(n, 1)$* , monograph, working draft.

Published or submitted

7 (w/ C. J. Leininger, W. D. Neumann, and A. W. Reid) *Length and eigenvalue equivalence*, submitted.

6 *Constructing isospectral manifolds*, submitted.

5 *Arithmetic cusp shapes are dense*, submitted.

4 *Cusps of Hilbert modular varieties*, submitted.

3 *Finite subgroups of arithmetic lattices in $U(2, 1)$* , To appear in *Geom. Dedicata*.

2 (w/ C. J. Leininger). *Separable subgroups of mapping class groups*, *Topology Appl.* **154** (2007), 1–10.

1 *Peripheral separability and cusps of arithmetic hyperbolic orbifolds*. *Algebr. and Geom. Topol.* 2004 (4), 721-755.

References

Alan W. Reid, University of Texas at Austin

Benson Farb, University of Chicago

William Goldman, University of Maryland

Alex Lubotzky, Hebrew University

Walter Neumann, Columbia University

Richard E. Schwartz, Brown University

Bruce Palka, University of Texas (Teaching)