

Christopher J. Leininger

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U.S. Citizen, Born Dec. 5, 1973

ACADEMIC POSITIONS

University of Illinois, Urbana-Champaign, IL

Assistant Professor, Dept. of Math., Fall 2005–present.

Columbia University, New York City, NY

Assistant Professor/N.S.F. Fellow, Dept. of Math., Fall 2003–Spring 2005.

Barnard College, New York City, NY

Assistant Professor/N.S.F. Fellow, Dept. of Math., Fall 2002–Spring 2003.

VISITS

MSRI Member, Berkeley, CA, Fall 2007.

Max-Planck-Institut für Mathematik, Bonn, Germany, *two week invited visit*, June/July, 2006.

University of Chicago, Chicago, IL, *one month visitor*, May/June, 2006.

EDUCATION

The University of Texas, Austin, TX

Ph.D. in Mathematics, May 2002. Supervisor: Alan W. Reid

Ball State University, Muncie, IN

B.S. in Mathematics, May 1997

GRANTS & AWARDS

Campus Research Board, UIUC, Spring 2007 (RA support) and Fall 2005.

Center for Advanced Study Fellowship, UIUC, Fall 2007.

N.S.F. Grant D.M.S.-0603881 5/2006–

University of Texas *Graduate School Outstanding Dissertation Award*, Spring 2003

N.S.F. *Mathematical Sciences Postdoctoral Research Fellowship*,

Fall 2002–Summer 2005. Sponsor: Walter D. Neumann

C.M.I. *Liftoff Mathematician*, Summer 2002

University Continuing Fellowship, UT, Austin, Fall 2000 - Spring 2001

Departmental Fellowships, UT, Austin, Spring 1999 and Summer 1998

INVITED PRESENTATIONS

- *International Workshop and Conference on Surface Mapping Class Groups and Related Topics*, NEHU, Shillong, Meghalaya, India. June 2008 (scheduled).
- *Alhfors–Bers Colloquium: Plenary speaker*, Newark, NJ, May 2008 (scheduled).
- *Geometric Groups on the Gulf*, Pensacola, FL, March 2008 (scheduled).
- *Spring Topology and Dynamical Systems Conference*, Milwaukee, WI. (scheduled, 20 min talk)
- *Topics in Teichmüller theory and Kleinian groups*, MSRI, Berkeley, CA, November 2007.
- *Hyperbolic structures on 3-manifolds and the large scale geometry of Teichmüller space*, Conference at the University of Warwick, England, July 2007.
- *Cornell Topology Festival*, Cornell U., Ithaca, NY, May 2007.(2 talks)
- *Geometry and Dynamics in Surfaces and 3-manifolds*, Brown U., Providence RI, May 2007.
- *Outre-espace et Espace de Teichmüller*, C.I.R.M. Luminy, Marseille, France, February 2007.
- *Geometry, Topology, and Their Interaction*, a conference to honor the 35th anniversary of the Farrell-Jones collaboration, Morelia Mexico, January 2007.
- *William Rowan Hamilton Geometry and Topology Workshop*, Hamilton Mathematics Institute in Trinity College Dublin, Ireland, September 2006.
- *Workshop in Geometry and Group Theory*, Max-Planck-Institut für Mathematik, Bonn, Germany, July 2006.
- *XXth Nevanlinna Colloquium*, E.P.F. Lausanne, Switzerland, August 2005.
- *Rational Billiards and Flows on Moduli Space*, U.I.C., Chicago, IL, June 2005.
- *Wasatch Topology Conference*, Park City, UT, May 2005.
- *Alhfors–Bers Colloquium: Workshop speaker*, Ann Arbor, MI, May 2005.
- *Conference in Hyperbolic Geometry & Geometric Analysis*, Wesleyan U., Middletown, CT, October 2004.
- *Conference on Combinatorial Topology in Mapping Class Groups*, U. of Chicago, Chicago, IL, April 2004.
- *Spring Topology and Dynamical Systems Conference*, Morelia, Mexico, March 2001. (20 min. talk)
- *AMS Meeting Special Sessions: Combinatorial and Geometric Group Theory and Geometric Topology*, Sectional **1025**, Miami U., Oxford, OH March 2007; *Teichmüller Theory and Hyperbolic Geometry*, Sectional **1021**, Storrs, CT October 2006; *Low Dimensional Topology and Geometry*, Sectional **1019**, Salt Lake City, UT October 2006; *Mahler Measure and Heights*, **112th** National Meeting, San Antonio, TX, January 2006; *Low Dimensional topology and Kleinian groups*, Sectional **1001**, Evanston, IL, October 2004; *Algebraic Geometry and Topology*, Sectional **994** Tallahassee, FL, March 2004; *Geometry and Topology*, Sectional **981**, Salt Lake City, UT, October 2002; *Hyperbolic Manifolds and Discrete Groups*, Sectional **974**, Ann Arbor, MI, March 2002.

- *Seminars*: Brown; Ball State; Caltech; Columbia; Cornell; Florida State; Indiana U; Lafayette College; MSRI; Northwestern; Ohio State; Princeton; Rice; Rutgers, New Brunswick; SUNY Stony Brook; SUNY Buffalo; UC, Santa Barbara; U Chicago; U Georgia; U Illinois, Chicago; U Illinois, Urbana-Champaign; U Maryland; U Michigan; U Texas; U Utah; Yale.
- *Colloquia*: Boston C; Eastern Illinois U; Florida State U; Louisiana State U; Rice; U Illinois, Urbana-Champaign; U Utah;

PAPERS/PREPRINTS

- (w/ S. Schleimer and Mahan Mj) *Cannon–Thurston maps and the complex of curves.*, in preparation.
- (w/ M. Duchin and K. Rafi) *The length spectrum of a flat metric.*, in preparation.
- *Graphs of Veech groups*, in preparation.
- (w/ S. Schleimer) *Connectivity of the space of ending laminations*, submitted.
- *Accidental parabolics and mapping class groups*, submitted.
- (w/ R. P. Kent IV and S. Schleimer) *Trees and mapping class groups*, submitted.
- (w/ D. B. McReynolds, W. D. Neumann, and A. W. Reid) *Length and eigenvalue equivalence*, to appear IMRN.
- (w/ R. P. Kent IV) *Uniform convergence in the mapping class group*, to appear in Ergodic Theory Dynam. Systems.
- (w/ B. Farb and D. Margalit) *The lower central series and pseudo-Anosov dilatations*, to appear in Amer. J. Math.
- (w/ R. P. Kent IV) *Subgroups of the mapping class group from the geometrical viewpoint*, In the tradition of Ahlfors–Bers IV, Contemp. Math., 432, Amer. Math. Soc. Providence, RI, 2007.
- (w/ R. D. Canary) *Kleinian groups with discrete length spectrum*, Bull. London Math. Soc. 39 (2007), 189–193.
- (w/ R. P. Kent IV) *Shadows of mapping class groups: capturing convex cocompactness*, to appear in Geom. Funct. Anal.
- (w/ D. B. McReynolds) *Separable subgroups of the mapping class group*, Topology Appl. 154 (2007), no 1, 1–10.
- (w/ D. Margalit) *Abstract commensurators of braid groups*, J. Algebra 299 (2006), no. 2, 447–455.
- (w/ A. W. Reid) *A combination theorem for Veech subgroups of the mapping class group*, Geom. Funct. Anal. 16 (2006) 403–436.
- *On groups generated by two positive multi-twists: Teichmüller curves and Lehmer’s number*, Geom. Topol., 8 (2004), 1301–1359.
- *Small curvature surfaces in hyperbolic 3-manifolds*, J. Knot Theory Ramifications 15 (2006), 379–411.
- *Equivalent curves in surfaces*, Geom. Dedicata 102 (2003), 151–177.
- (w/ A. W. Reid) *The co-rank conjecture for 3-manifold groups*, Algebr. Geom. Topol. 2 (2002), 37–50.
- *Compressing totally geodesic surfaces*, Topology Appl. 118 (2002), 309–328.
- *Surgeries on one component of the Whitehead link are virtually fibered*, Topology 41 (2002), 307–320.

TEACHING

- Instructor:
 - U.I.U.C.:
 - Spring 2008: MATH 231, 249, Honors Calculus II; MATH 595, Differential Geometry II; MATH 597, Reading course on mapping class groups (w/ Jiyoung Kim); MATH 599, Thesis Research (w/ Chia-yen Tsai).
 - Fall 2007: No teaching (CAS Fellowship).
 - Summer 2007: Supervised two REGS; Reading course on hyperbolic geometry (w/ Jiyoung Kim, Brent Solie, Chia-yen Tsai).
 - Spring 2007: MATH 231, 249, Honors Calculus II; MATH 597, Reading course on hyperbolic geometry of surfaces (w/ Chia-yen Tsai).
 - Fall 2006: MATH 520, Differentiable Manifolds; MATH 415, Linear Algebra;
 - Spring 2006: MATH 230, Honors Calculus II; MATH 595, Mini-course on Mapping Class Groups and Teichmüller Theory;
 - Fall 2005: MATH 243, Calculus III+.
 - Columbia/Barnard:
 - Fall 2004: Groups and Symmetry
 - Fall 2003: Algebraic Topology I
 - Spring 2003: Calculus II
 - Fall 2002: Calculus III.
 - U.T.:
 - Pre-calculus/Calculus, Fall 2001.
- Teaching Assistant, U.T.:
 - Spring 2002: Topology I; Differential Topology; Fall 1999: Topology I; Algebraic Topology; Fall 1998: Calculus I; Spring 1998: Calculus II; Fall 1997: Calculus I.

GRADUATE STUDENTS SUPERVISED

Chia-yen Tsai (UIUC, current)

MISCELLANEOUS

Member A.M.S.

Co-organizer, Differential geometry seminar, UIUC, 2006–.

Co-organizer, Geometric-topology seminar, Columbia U., 2004–2005 academic year

Co-organizer, *Braids, Links, and Mapping Class Groups*, a conference in honor of Joan Birman, Spring 2005

Thesis committee member: Ania Lenzhen (U.I.C., May 2006), Lucas Sabalka (U.I.U.C., April 2006), Harriet Moser (Columbia, May 2005), Abhijit Champanerkar (Columbia, May 2003)

Journal referee for: *Comm. Anal. Geom.*, *Experiment. Math.*, *Geom. Dedicata*, *Geometry & Topology*, *Pacific J. Math.*, *Topology Appl.*, *Trans. Amer. Math. Soc.*, *J. London Math. Soc.*