

**CURRICULUM VITAE****SEONHEE LIM**

**Address:** Department of Mathematics, Cornell University, 310 Malott Hall, Ithaca, NY, 14853-4201, USA

**Phone:** (607) 255-7113

**Fax:** (607) 255-7149

**E-mail:** slim@math.cornell.edu

**homepage:** <http://www.math.cornell.edu/~slim>

**Education**

Ph.D. Yale University and Université Paris-Sud, May and June 2006.

Thesis Advisor: G. Margulis and Frédéric Paulin.

Thesis title: Enumeration and entropy rigidity of lattices in automorphism groups of trees and buildings.

M.S. Yale University, May 2001.

B.S. Seoul National University, graduation with honors (Summa cum laude), February 1999.

**Research field :** Dynamics and ergodic theory of group actions on trees and buildings, metric spaces of negative curvature, discrete subgroups of Lie groups, rigidity.

**Papers**

1. Counting overlattices in automorphism groups of trees, *Geom. Dedicata*, Vol 118, no. 1 (2006), pp. 1-21.
2. Minimal volume entropy on graphs, to appear in *Trans. AMS*. (<http://www.arxiv.org/abs/math.GR/0506216>)
3. Covering theory for complexes of groups (joint work with A. Thomas), to appear in *J. Pure Appl. Algebra*. (<http://www.arxiv.org/abs/math.GR/0605303>)
4. Counting overlattices for polyhedral complexes (joint work with A. Thomas), submitted for publication.
5. A proof of a  $L^{1/2}$  ergodic theorem (joint work with François Ledrappier), submitted for publication. (<http://www.nd.edu/~slim>)

**Talks**

Minicourse on Graphs of Groups and Complexes of Groups, Neuchatel, Switzerland (4 lectures, June 2, 9, 16, 23, 2008)

Geometry and Dynamics Seminar, Ecole Normale Supérieure de Lyon, France (June 18, 2008)

- Conference on Analysis, Geometry and Dynamics on Groups, Neuchatel, Switzerland (June 13, 2008)
- Conference on Discrete Groups and Geometric Structures with Applications, Kortrijk, Belgium (May 29, 2008)
- Dynamics Seminar, Northwestern University (May 13, 2008)
- AMS Spring Eastern Sectional Meeting, Special Session on Geometric Topology, Courant Institute (Mar. 15-16, 2008)
- Topology and Geometric Group Theory Seminar, Cornell University (Feb. 26, 2008)
- Geometry and Topology Seminar, SUNY Buffalo (Feb. 22, 2008)
- Geometry and Topology Seminar, Binghamton University (Feb. 21, 2008)
- Geometric Group Theory Seminar for Postdocs, MSRI (Oct. 3, 2007).
- Geometry Seminar, University of Notre Dame (Sept. 27, 2007)
- Algebra summer workshop, Seoul National University (August, 2007)
- Number Theory Seminar, Korea Institute of Advanced Studies (August, 2007)
- Geometry Seminar, Korea Institute of Advanced Studies (July, 2007)
- Ergodic Theory Seminar, Ohio State University (May 10, 2007).
- Topology and Geometric Group Theory Seminar, Cornell University (March 13, 2007).
- Graduate Student Seminar, Yale University (May 19, 2006).
- Geometry Seminar, University of Notre Dame (May 11, 2006).
- Topology and Geometric Group Theory Seminar, Cornell University (December 6, 2005).
- Geometric Group Theory Seminar, Ohio State University (November 30, 2005).
- Seminar on Group Actions: Dynamics, Geometry, Invariants, Yale University (November 8, 2005).
- Conference on Geometric and Probabilistic Methods in Group Theory and Dynamical Systems, Texas A&M (November 4, 2005).
- AMS Special Session on Geometric group theory, Bard College (October, 2005).
- Topology and Geometry seminar, University of Chicago (August 2005).
- International Conference “Asymptotic and Probabilistic Methods in Geometric Group Theory”, University of Geneva, Switzerland, June 2005.
- Group Actions: Dynamics, Geometry, Invariants Seminar, Yale University (December 2004).
- Lie Group Seminar, Caltech (November 2004).
- International Conference on Group Theory: combinatorial, geometric and dynamical aspects of infinite groups, Gaeta, Italy (June 2003).

Séminaire Geometrie-Topologie-Dynamique, Université Paris-Sud, France (February 2003).

Students seminar on “Groupes hyperboliques d’après Gromov”, Yale University (December 2001).

Students seminar on “Dynamical systems”, Yale University (3 talks, Mars 2001).

### Conferences attended

Conference on Analysis, Geometry and Dynamics on Groups, Neuchatel, Switzerland (June 13, 2008)

Conference on Discrete Groups and Geometric Structures with Applications, Kortrijk, Belgium (May, 2008)

AMS Spring Eastern Sectional Meeting, Special Session on Geometric Topology, Courant Institute, New York, USA (March 2008)

Topics in Teichmüller Theory, MSRI, Berkeley, USA (November 2007)

Topics in Geometric Group Theory, MSRI, Berkeley, USA (November 2007)

Connections for women, Teichmüller Theory and Kleinian Groups, MSRI, Berkeley, USA (August 2007)

Connections for women, Geometric Group Theory, MSRI, Berkeley, USA (August 2007)

Clay Mathematics Institute Summer School on Homogeneous Flows, Moduli Spaces and Arithmetic, Pisa, Italy (June-July 2007)

Semi-annual workshop in Dynamical systems and Related Topics, State College, USA (November 2006).

Midwest Dynamics conference, Indianapolis, USA (October 2006).

Conference in honor of Armand Borel, Geneva and Zurich, Switzerland (June-July 2005).

International conference “Asymptotic and Probabilistic Methods in Geometric Group Theory”, Geneva, Switzerland (June 2005).

Summer school, “Non-positively curved geometries, discrete groups and rigidities”, Grenoble, France (June 2004).

International Conference on Group Theory: combinatorial, geometric and dynamical aspects of infinite groups, Gaeta, Italy (Juin 2003).

Conference on Advances in Rigidity Theory, Zurich, Switzerland (June 2002).

Semi-annual workshop in Dynamical system and related topics, Pennsylvania State University, PA (October 2001).

**Awards and Honors**

- [2002-2005] Fellowship, Université Paris-Sud, France.
- [1999-2006] Fellowship, Yale University.
- [1996] 3rd prize, National Math Competition for University students, Korea.
- [1995-1999] KFAS (Korea Foundation for Advanced Studies) Scholarship

**Teaching**

- [Spring 2008] Instructor, Multivariable Calculus, Cornell University.
- [Spring 2007] Instructor, Linear algebra and differential equations, Univ. of Notre Dame.
- [Spring 2007] Instructor, Elements of calculus II, Univ. of Notre Dame.
- [Fall 2006] Instructor, Calculus of one variable II, Univ. of Notre Dame.
- [Fall 2006] Instructor, Elements of calculus I, Univ. of Notre Dame.
- [Fall 2005] Instructor, Calculus of one variable II (Math 115), Yale University.
- [Fall 2004] Instructor, Multivariable calculus (Math 120), Yale University.
- [Fall 2003] Instructor, Calculus of one variable II (Math 115), Yale University.
- [Spring 2002] Instructor, Multivariable calculus (Math 120), Yale University.
- [Spring 2000, Fall 2001] Math and science tutor, Morse College, Yale University.
- [1999-2001] Mathematics tutor, Yale Univ.

**References**

- Gregory Margulis, Yale University, *margulis@math.yale.edu*.
- Hillel Furstenberg, Hebrew University, *harry@math.huji.ac.il*.
- Francois Ledrappier, University of Notre Dame, *ledrappier.1@nd.edu*.
- Michael Frame (teaching), Yale University, *michael.frame@yale.edu*.