

Viveka Erlandsson

PERSONAL INFORMATION Aalto Science Institute *E-mail:* viveca.erlandsson@aalto.fi
Aalto University *Website:* <http://users.asci.aalto.fi/erlandsson/>
PO Box 15500 *Citizenship:* Sweden
FI-00076 Aalto
Finland

RESEARCH INTERESTS Hyperbolic geometry, low dimensional topology, Teichmüller theory and related fields.

ACADEMIC POSITIONS **July 2013-present** *Research Fellow (post-doc)*, Aalto University, Espoo, Finland
Oct 2015-March 2016 *Swiss National Science Foundation post-doc*, University of Fribourg, Switzerland

EDUCATION **The Graduate Center of the City University of New York**, New York, NY
Ph.D., Mathematics, May 2013
Dissertation: "The Margulis Region in Hyperbolic 4-space"
Adviser: Ara Basmajian
M.Phil., Mathematics, 2011
San Francisco State University, San Francisco, CA
M.A., Mathematics, 2006
Thesis: "Tame Homomorphisms of Polytopal Rings"
Adviser: Joseph Gubeladze
B.S., Applied Mathematics, 2005

PUBLICATIONS
AND PREPRINTS

- Short closed geodesics with self-intersections, with Hugo Parlier (preprint, 2016) [arXiv : 1608.07436\[math.GT\]](#)
 - A remark on the word length in surface groups, (preprint, 2016) [arXiv : 1608.07436\[math.GT\]](#)
 - Simplicial embeddings between multicurve graphs, with Federica Fanoni, *to appear in Michigan Mathematical Journal*, [arXiv : 1510.07700\[math.GT\]](#)
 - Counting Curves in Hyperbolic Surfaces, with Juan Souto, *to appear in Geometric and Functional Analysis (published online 2016)*, [arXiv : 1508.02265\[math.GT\]](#)
 - On Margulis cusps of hyperbolic 4-manifolds, with Saeed Zakeri, *Geometriae Dedicata* 174 (2015), 75-103
 - A discreteness criterion for groups containing parabolic isometries, with Saeed Zakeri, *Contemporary Mathematics* 639 (2015), 235-242
 - The Margulis region and screw parabolic elements of bounded type, *Bull. London Math. Soc.* 45 (2013), 1209-1220.
 - Tame Homomorphisms of Polytopal Rings, *Beitr. Algebra Geom.* 49 (2008), 315-323
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CONFERENCE
TALKS

- Workshop on Grothendieck-Teichmüller Theories, Chern Institute of Mathematics, Nankai University, Tianjin, China, July 2016
- Asymptotic Geometry, Sète, France, June 2016
- Advanced School on Geometric Group Theory and Low-Dimensional Topology: Recent Connections and Advances, Trieste, Italy, June 2016
- AMS Spring Eastern Sectional Meeting, Special Session on Invariants of Closed Curves on Surfaces, Stony Brook University, NY, March 2016
- Finsler geometry and applications to low-dimensional geometry and topology and moduli spaces, University of Cagliari, Italy, September 2015
- Geometry and Analysis on Hyperbolic Spaces, University of Delhi, India, Dec 2014
- Sixth Ahlfors-Bers Colloquium, Yale University, CT, Oct 2014
- Sixth Iberoamerican Congress on Geometry, CUNY, NY, May 2014
- Finsler geometry and applications, Galatasaray University, Istanbul, Turkey, Apr 2014
- Joint Mathematics Meetings, AMS Special Session on Geometric and Analytic Methods in Teichmüller Theory and Hyperbolic Geometry, San Diego, CA, Jan 2013

- Conference on Higher Teichmüller-Thurston Theory, Montreal, Canada, Oct 2012
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SEMINAR TALKS

- Complex Analysis and Dynamics Seminar, CUNY Graduate Center, NY, April 2016
- Boston College Geometry/Topology seminar, Boston, MA, March 2016
- Geometric Group Theory and Topology Seminar, Tufts University, Boston, MA, March 2016
- Geometry and Topology Seminar, Brown University, Providence, RI, March 2016
- Geometry-Topology Seminar, Temple University, Philadelphia, PA, March 2016
- Topology seminar, University of Michigan, Ann Arbor, MI, March 2016
- Séminaire Gaston Darboux, University of Montpellier, France, February 2016
- Séminaire GT3, University of Strasbourg, France, December 2015
- Geometry and Topology Seminar, University of Warwick, UK, November 2015
- Séminaire Groupes et Géométrie, University of Geneva, Switzerland, November 2015
- Oberseminar Geometrie, University of Fribourg, Switzerland, November 2015
- Seminari di Geometria, University of Pisa, Italy, March 2015
- Pure Maths Colloquium, Durham University, UK, Jan 2015
- Geometry Seminar, University of Jyväskylä, Finland, Nov 2014
- Geometric Analysis Seminar, University of Helsinki, Finland, Nov 2014
- Topology Seminar, Stony Brook University, NY, Oct 2014
- Center for Quantum Geometry of Moduli Spaces, Aarhus University, Denmark, Sep 2014
- Oberseminar Geometrie, University of Fribourg, Switzerland, Apr 2014
- Analysis and Geometry Seminar, Aalto University, Finland, Oct 2013
- Topology Seminar, Wesleyan, CT, Apr 2013
- Geometry and Topology Seminar, CUNY Graduate Center, NY, Apr 2013
- Dynamical System Seminar, Stony Brook University, NY, Feb 2013
- Geometry and Topology Seminar, Temple University, PA, Nov 2012
- Hyperbolic Geometry Seminar, Simons Center, Stony Brook University, NY, Oct 2012

TEACHING
EXPERIENCE

University of Fribourg, Switzerland, Fall 2015

- (Teaching Assistant) *Algèbre et géométrie*

Aalto University, Finland, Fall 2014

- (Instructor) *Hyperbolic Geometry*, MS-EI990

Hunter College CUNY, New York, NY, Aug 2011-June 2013

- (Instructor) *Calculus with Analytic Geometry*, Math 150
- (Instructor) *Pre-calculus*, Math 125
- (Instructor) *Algebra for College Students*, Math 101
- (Instructor) *Mathematics and Everyday Life*, Math 102

Baruch College CUNY, New York, NY, Aug 2008-Aug 2011

- (Instructor) *Applied Calculus and Matrix Algebra* (Baruch College, Math 2207)
- (Instructor) *Applied Calculus II*, Math 2205
- (Instructor) *Pre-calculus and Elements of Calculus*, Math 2003
- (Instructor) *College Algebra*, Math 1030 and 1031

AWARDS AND
FELLOWSHIPS

- University Fellowship (CUNY), 2008-2011, 2012-2013
- Rees Dissertation Fellowship (CUNY), 2011-2012
- Chancellor's Fellowship (CUNY), 2006-2011
- Science Fellowship (CUNY), 2006-2008
- Albert Bowker Award for Outstanding Achievement, 2007
- Graduate Student Award for Distinguished Achievement (SFSU), 2006

SERVICE
ACTIVITIES

- Teaching Assistant: Institute for Advanced Studies Women and Mathematics Program: *Curves, loops, and words in Geometry*, May 2016
- Co-organizer: *Research Seminar* during the Institute for Advanced Studies Women and Mathematics Program: *Curves, loops, and words in Geometry*, May 2016
- Supervision of undergraduate student: Benjamin Bandli (University of Wisconsin - Madison), AScI Internship programme, Finland, June-August 2015
- Organizer: Hyperbolic Geometry Seminar, CUNY Graduate Center, 2010-2013