Curriculum Vitae 2014
Eriko Hironaka

Contact Information

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Professional Preparation

1990   Doctor of Philosophy, Brown University, Providence, RI.
Advisor: Alan Landman.
Thesis Title: *Abelian coverings of the complex plane branched along configurations of real lines*.

1984   BA, Harvard University, Cambridge, MA. Major: Mathematics.

Current Membership in Professional Organizations

American Mathematical Society

Professional Experience

2011–present   Professor, Florida State University.

2002–2011   Associate Professor, Mathematics, Florida State University.

1997–2002   Assistant Professor, Mathematics, Florida State University.

1994–1997   C.L.T.A. Assistant Professor, Mathematics, University of Toronto.

1992–1994   Szego Instructor, Mathematics, Stanford University.

Long Term Visiting Professorships

2011–2012   Tokyo Institute of Technology, Tokyo, Japan. Department of Mathematics.

Fall 2009   Harvard University, Cambridge, MA. Department of Mathematics.

2004–2005   Osaka University, Osaka, Japan. Department of Mathematics.

Fall 1999   Harvard University, Cambridge, MA. Department of Mathematics.

1991–1992   Visiting Researcher, Max-Planck-Institut-fur-Mathematik, Bonn, Germany.

1990–1991   Visiting Assistant Professor, Stanford University. Department of Mathematics.

1989–1990   Visiting Assistant Professor, Haverford College. Department of Mathematics.

Awards and Recognitions

2014-2016   Marion Bradley Brennan Professorship, Florida State University, Department of Mathematics "to support an internationally known scholar in the field of mathematics, with a proven track record in research, teaching and especially mentoring undergraduates and graduate students"

Summer Visiting Positions

2003	Institute des Hautes Etudes Scientifiques, Bures-sur-Yvette, France.
2002	Max-Planck-Institut-fur-Mathematik, Bonn, Germany.
2001	Max-Planck-Institut-fur-Mathematik, Bonn, Germany.
1999	Math Sciences Research Institute, Berkeley, CA.
1998	Institute des Hautes Etudes Scientifiques, Bures-sur-Yvette, France.
1995	Institut Fourier, Grenoble, France. Department of Mathematics.
1992	Institute des Hautes Etudes Scientifiques, Bures-sur-Yvette, France.

Contracts and Grants Funded

(Jul 2011–Aug 2016) *Fibered 3-Manifolds and their Monodromy*. Simon Foundation Collaboration Grant (Florida State University)

(Apr 2009–Mar 2010) *Topology of Algebraic Varieties*. National Science Foundation Conference Grant (Florida State University)

(Sept 1995- July 1997) National Sciences and Engineering Research Council of Canada Research Grant (University of Toronto)

(Sept 1993-Aug 1995) National Science Foundation Research Grant (Stanford University)

Selected Publications

(2014) *with Y. Algom-Kfir, and K. Rafi,* Digraphs and cycle polynomials for free-by-cyclic groups, (to appear in *Geometry and Topology 2014*)

(2014) Penner sequences and asymptotics of minimum dilatations for subfamilies of the mapping class group. *Topology Proceedings* vol. 44, 2014, p. 315--324

(2013) *with E. Gadre, R. Kent, and C. Leininger*. Lipschitz constants to curves complexes. *Math Research Letters*, Volume 10, p. 2041--2060

(2012) Generalized lantern relations and planar line arrangements. *Contemporary Math. Volume "Computational Algebraic and Analytic Geometry of Low-dimensional Varieties"*, *572*, 113--125.

(2010) Small dilatation pseudo-Anosov mapping classes coming from the simplest hyperbolic braid. *Journal of Algebraic and Geometric Topology*, 15.

(2009) *with B. Gross and C. McMullen*. Cyclotomic factors of Coxeter polynomials. *Journal of Number Theory*, *129*, 1034--1043.

(2006) *with E. Kin.* A family of pseudo-Anosov braids with small dilatation. *Journal of Algebraic Geometry and Topology*, *6*, 699--738.

Recent Keynote and Plenary Presentations at Conferences and Workshops

(2014) Geometry and Topology Seminar at Brown and Yale (GATSBY), Brown Unviersity, Providence, RI.

(2013) *Minimum dilatation problem for pseudo-Anosov mapping classes.* Semi-Plenary presentation at 47th Spring Topology and Dynamics Conference, Central Connecticut State University, Hartford, Connecticut.

(2012) *Minimum dilatation problem and quasi-periodicity conjecture.* Plenary presentation at Annual Meeting, Mathematical Society of Japan, University of Science, Tokyo, Japan.

Doctoral Thesis Advising

Armstrong, J. K., (PhD 2012). *Principal elements of mixed-sign Coxeter systems (co-director with K. Petersen)*

Valdivia, A. D., (PhD 2011). *Teichmueller polynomials and asymptotics of minimal dilatation pseudo-Anosov mapping classes*.

Mortada, J. W., (PhD 2011). *Embeddings of Artin Groups in the Mapping Class Group* (co-director with S. Fenley)

Current PhD Students

Aktas, Mehmet (Candidacy Fall 2013, expected PhD 2016)
Arnett, Jacob (expected Candidacy, 2015)
Billet, Robert (Candidacy Fall 2014)

Undergraduate Honors Thesis Advising

Dominic Pafundi (BS 2011). *A simple roundhouse class of genus two*.

Department Service (Florida State University)

Member, Executive Committee (2008-2010, 2013-present)
Elected Member, Faculty Evaluation Committee (2003-2004, 2010–2011, 2013-2014).
Pure Mathematics Program Director (2008-2010, 2013-present)
Organizer, Department Open House "Math Fun Day" (Oct. 2014, co-organizer Oct. 2013)
Co-organizer, Topology Week and FSU-UF joint workshop in Topology (March 2013)
Chair, Visibility Committee (2012–present).
Member, Visibility Committee (1999–2002).
Member, Graduate Committee (2002, 2005–present).
Chair, Unit Assessment Survey Committee (2002–2003).

Service to the Profession

Co-organizer, AMS special session on "Topology and Number Theory", Knoxville, TN (*co-organizer with K. Petersen*) (2014)

Mittag-Leffler Institute, Summer Workshop on Growth and Mahler Measure in Geometry and Topology (*co-organizer with R. Kellerhals*) (2013)

PI - NSF Conference Grant and co-organizer, Conference on Topology of Algebraic Varieties, Jaca, Spain. (2009-2010)

Co-organizer, AMS Special Session on Algebraic Geometry and Topology, Tallahassee, FL. (2004)

AMS Special Session on Topology of Algebraic Varieties, Irvine, CA. (2001)