Chenxi Wu

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https://wuchenxi.github.io
https://arxiv.org/a/wu_c_3.html

Education and Employment

B. Sc. in Mathematics, Peking university	July 2010.
Ph. D in Mathematics, Cornell university	August 2016.
Advisor: John Smillie	
Thesis: Translation surfaces: saddle connections, triangles and covering constructions	
Member of MSRI	August 2016-Oct 2016
Postdoc at MPIM	Nov 2016-July 2017
Hill Assistant Professor at Rutgers	September 2017-May 2020
Assistant Professor at University of Wisconsin at Madison	September 2020-

Publications

- Harrison Bray, Diana Davis, Kathryn Lindsey and Chenxi Wu. The shape of Thurston's Master Teapot *Advances in Mathematics* 377, 107481, 2021. doi:10.1016/j.aim.2020.107481.
- Hyungryul Baik, Hyunshik Shin and Chenxi Wu. An upper bound on the asymptotic translation length on the curve graph and fibered faces. *arXiv:* 1801.06638, accepted by *Indiana University Math Journal*
- Hyungryul Baik, Farbod Shokrieh, Chenxi Wu. Limits of canonical forms on towers of Riemann surfaces *Crelle* 2019. doi: 10.1515/crelle-2019-0007.
- Farbod Shokrieh and Chenxi Wu. Canonical measures on metric graphs and a Kazhdan's theorem *Invent. Math.* 215(3), 819-862, 2019. doi: 10.1007/s00222-018-0838-5
- Hyungryul Baik, Chenxi Wu, KyeongRo Kim, and TaeHyouk Jo. An algorithm to compute Teichmüller polynomial from matrices *Geometriae Dedicata* 2019 doi: 10.1007/s10711-019-00450-4
- Hyungryul Baik, Ahmad Rafiqi and Chenxi Wu. Is a typical bi-Perron number a pseudo-Anosov dilatation? *Ergodic Theory and Dynamical Systems* 39(7), 1745-1750, 2019. doi: 10.1017/etds.2017.109
- Chenxi Wu. Lattice surfaces and smallest triangle. *Geometriae Dedicata*, 187(1), 107-121, 2017. doi: 10.1007/s10711-016-0191-z
- Lucien Clavier, Anja Randecker and Chenxi Wu. Rotational component spaces for infinite-type translation surfaces. *Geometriae Dedicata* 201(1), 57-80, 2019. doi: 10.1007/s10711-018-0381-y
- Hyungryul Baik, Ahmad Rafiqi and Chenxi Wu. Constructing pseudo-Anosov maps with given dilatations. *Geometriae Dedicata*, 180(1), 39-48, 2016. doi: 10.1007/s10711-015-0089-1
- Chenxi Wu. Deloné property of the holonomy vectors of translation surfaces. *Israel Journal of Mathematics*, 214(2), 733-740, 2016. doi: 10.1007/s11856-016-1357-y
- Chenxi Wu. The relative cohomology of abelian covers of the flat pillowcase. *Journal of Modern Dynamics*, 9, 123-140, 2015. doi:10.3934/jmd.2015.9.123
- Yingjie Guo, Chenxi Wu, et al. Gene-Based Nonparametric Testing of Interactions Using Distance Correlation Coefficient in Case-Control Association Studies *Genes* 9(12), 2018. doi: 10.3390/genes9120608
- Yingjie Guo, Chenxi Wu, et al. Combining Sparse Group Lasso and Linear Model improves power to detect generic variants underlying quantitative traits *Frontiers in Genetics*, 2019 doi: 10.3389/fgene.2019.00271

Preprints

- Hyungryul Baik, Dongryul M. Kim and Chenxi Wu. On the asymptotic translation lengths on the sphere complexes and the generalized fibered cone *arXiv:*2011.08034
- Hyungryul Baik, Eiko Kin, Hyunshik Shin and Chenxi Wu. Asymptotic translation length and normal generation for the fibered cone *arXiv:*1909.00974
- Kathryn Lindsey and Chenxi Wu. A characterization of Thurston's Master Teapot *arXiv:*1909.10675

Grants

AMS MRC — Summer 2017
KHYS Visiting Researcher Scholarship — Summer 2014
Graduate Fellowship, Cornell University — 2010-2011

Talks

- Stable length on sphere complexes, Dynamics Seminar, Boston College, April 2021
- Entropy on quadratic Hubbard trees, Dynamics and Geometry seminar, University of Michigan at Ann Arbor, February 2021
- Asymptotic translation lengths on free factor and free splitting complexes, Geometry and Topology Online Seminar, University of Warwick, November 2020
- Kazhdan's theorem for metric graphs, Topology seminar, CUNY, February 2020
- Characterization of Thurston's Teapots, Dynamics seminar, CUNY, November 2019
- Kazhdan's theorem for metric graphs, Discrete Geometry seminar, October 2019
- Kazhdan's theorem for metric graphs, Geometry/Topology Fair, KAIST, August 2019
- Kazhdan's theorem for metric graphs, GAGTA, Bar Ilan University, Israel, May 2019
- Canonical metric on surfaces and manifolds, Topology seminar, KAIST, August 2018
- Invertable coding on Kleinian groups, GAGTA, KIAS, July 2018
- An upper bound on the asymptotic translation length on the curve complex, Dynamics seminar, CUNY, April 2018
- Dynamics of generalized beta maps, Dynamics seminar, Boston College, March 2018
- Dynamics of generalized beta maps, MRC special section of JMM, San Diego, January 2018.
- An upper bound on the asymptotic translation length on the curve complex, Dynamics seminar, CUNY, November 2017
- Entropy of generalized beta maps, KAIST, August 2017
- Canonical metric on graphs, KAIST, August 2017
- Canonical metric on graphs, MPIM Oberseminar, December 2016
- Singularities of infinite translation surfaces, Bugcat conference, Binghamton University, November 2015
- (With Ahmad Rafiqi) Building pseudo-Anosov maps, Young people seminar, Dynamical Developments: a conference in Complex Dynamics and Teichmüller theory Jacobs university, August 2015
- Building pseudo-Anosov maps, Max Planck Institute of Mathematics, August 2015
- Building pseudo-Anosov maps, Bugcat conference, Binghamton University, October 2014
- Characterization of Bouw-Möller surfaces, Karlsruhe Institute of Technology, July 2014
- Horocycle orbit closures in strata, Ergodic theory seminar, UIUC, April 2014
- The affine group action on the cohomology of abelian covers of the pillowcase, Postdoc and Graduate student seminar, ICERM, October 2013

Teaching and Outreach

Instructor for Introduction for mathematical reasoning	Spring 2019
Instructor for Introduction for Applied Mathematics	Fall 2018
Instructor for Linear Optimization	Spring 2018
Instructor for Elementary Linear Algebra	Fall 2017
Instructor for Elementary PDE	Fall 2017
TA of Linear Algebra for Engineers	Spring 2016
Instructor of Calculus I	Spring 2015
TA of Differential Equations	Fall 2014
TA of Multivariable Calculus for Engineer	Spring 2014
TA of Totally Awesome Math	Spring 2014
TA of Multivariable Calculus	Spring 2013
TA of Honors Calculus II	Fall 2012
Mentor for Undergraduate Research Scholars program in UW-Madison	Fall 2020-
Introduction on L^2 invariants	KAIX Summer School 2019
Volunteering as TA for F.E.M.M.E.S. in University of Michigan	Fall 2017
Volunteering as instructor and TA for Math Explorer's Club in Cornell	March 2016
Volunteering as instructor at Math Club of Ithaca High School	Fall 2011