Chenxi Wu

Address: 434 Hill Center, Piscataway NJ, USA 08854
email: wuchenxi2013@gmail.com
https://wuchenxi.github.io
https://arxiv.org/a/wu_c_3.html

Education and Employment

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

Publications

- 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, Hyunshik Shin and Chenxi Wu. An upper bound on the asymptotic translation length on the curve graph and fibered faces *arXiv:* 1801.06638
- Harrison Bray, Diana Davis, Kathryn Lindsey and Chenxi Wu. The shape of Thurston's Master Teapot *arXiv:*1902.10805

Other works in preparation

- Hyungryul Baik, Eiko Kin, Hyunshik Shin and Chenxi Wu. Asymptotic translation length and normal generation for the fibered cone
- Kathryn Lindsey and Chenxi Wu. A characterization of Thurston's Master Teapot

Grants

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

Talks

- 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

Teaching

- Introduction for mathematical reasoning — Spring 2019
- Introduction for Applied Mathematics — Fall 2018
- Linear Optimization — Spring 2018
- Elementary Linear Algebra — Fall 2017
- Elementary PDE — Fall 2017
- Calculus I — Spring 2015

TA

- Linear Algebra for Engineers — Spring 2016
- Differential Equations — Fall 2014
- Multivariable Calculus for Engineer — Spring 2014
- Totally Awesome Math — Spring 2014
- Multivariable Calculus — Spring 2013
- Honors Calculus II — Fall 2012

Summer School and Outreach

- Introduction on L^2 invariants — KAIX Summer School 2019
- F.E.M.M.E.S. in University of Michigan (as TA) — Fall 2017
- Math Explorer's Club in Cornell — March 2016
- Math Club of Ithaca High School — Fall 2011