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-

Publications

- Hyungryul Baik, Farbod Shokrieh, Chenxi Wu. Limits of canonical forms on towers of Riemann surfaces *arXiv:* 1808.00477 To appear in *Crelle*

- Farbod Shokrieh and Chenxi Wu. Canonical measures on metric graphs and a Kazhdan's theorem *arXiv:* 1711.02609 *Invent. Math.*

- Hyungryul Baik and Chenxi Wu. An algorithm to compute Teichmüller polynomial from matrices *arXiv:* 1703.09089 To appear in *Geometriae Dedicata*

- Hyungryul Baik, Ahmad Rafiqi and Chenxi Wu. Is a typical bi-Perron number a pseudo-Anosov dilatation? *arXiv:* 1612.03084 *Ergodic Theory and Dynamical Systems*

- Chenxi Wu. Lattice surfaces and smallest triangle. *Geometriae Dedicata*, doi: 10.1007/s10711-016-0191-z

- Lucien Clavier, Anja Randecker and Chenxi Wu. Rotational component spaces for infinite-type translation surfaces. *arXiv:* 1412.0633 *Geometriae Dedicata*

- Hyungryul Baik, Ahmad Rafiqi and Chenxi Wu. Constructing pseudo-Anosov maps with given dilatations. *Geometriae Dedicata*, doi: 10.1007/s10711-015-0089-1

- Chenxi Wu. Deloné property of the holonomy vectors of translation surfaces. *Israel Journal of Mathematics*, doi: 10.1007/s11856-016-1357-y

- Chenxi Wu. The relative cohomology of abelian covers of the flat pillowcase. *Journal of Modern Dynamics*, 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* 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* 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

Grants

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

Talks

- 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 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
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

Programming languages

C, Python, C++, R