

Frederick Robinson

Education

- 2014 Master of Arts in Mathematics (Expected), University of California Los Angeles.
- 2012 **Bachelor in Mathematics with Honors**, Northwestern University, 3.62 (Major GPA).

Robert R. Welland Prize for Outstanding Achievement in Mathematics by a Graduating Senior Honors thesis on *Persistant Homology* under David Nadler

2008 High School Diploma.

Research Experience

- 2010 **Discrete and Continuous Geometry**, Selected for and attended two week research conference at Northwestern University.
- 2010 Number Theory Research, Funded to conduct research on cyclotomic integers under Prof. F. Calegari.
- 2011 **Indiana University Research Program**, NSF funded project investigating phylogenetics with Prof. E Housworth.

Employement

- 2012-2013 Teaching Assistant, Conducted recitations for undergraduate classes.
 - 2010 **Physics Programming**, Coded in C leveraging GNU Scientific Library to simulate gravitational waves from intermediate mass ratio inspiral.

Computer Skills and Interests

Proficient Go, Mathematica, Python

Basic Java, C

Miscellaneous Windows, Microsoft Office, Linux, LATEX

Algorithms Greedy optimization, divide and conquer, dynamic programming, network flows, reductions, and randomized algorithms. Computational tractability (NP-completeness).

Machine Regression: regularization; Neural Networks: backpropogation; SVMs; Unsupervised Learning Learning: clustering, dimensionality reduction; Recommender Systems

Publications

Frederick Robinson and Michael Wurtz. On the magnitudes of some small cyclotomic integers. *Acta Arithmetica*, 160(4):317–32, 2013.

Languages

English Fluent

Spanish Proficient