

# Frederick Robinson

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## 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 *Persistent Homology* under David Nadler
- 2008 **High School Diploma**.

## Research Programs

- 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*.

## Jobs

- 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, L<sup>A</sup>T<sub>E</sub>X
- Algorithms Greedy optimization, divide and conquer, dynamic programming, network flows, reductions, and randomized algorithms. Computational tractability (NP-completeness).
- Machine Learning Regression: regularization; Neural Networks: backpropagation; SVMs; Unsupervised learning: clustering, dimensionality reduction; Recommender Systems

## Languages

- English **Fluent**
- Spanish **Proficient**