Evan M. O’Dorney

**RESIDENCE**

* Born in Seattle, WA, Sep. 16, 1993
* Living in Danville, CA since 1998
* Permanent address:

119 Shelterwood Lane

Danville, CA 94506

* Permanent email: [e\_o916\_ath@g\_ail.co\_](mailto:e_o916_ath@g_ail.co_) (replace \_ as appropriate)

**EDUCATION**

* Ph.D. student at Princeton (expected class of 2021)
* Part III of the Mathematical Tripos, Cambridge University (class of 2016)
* B.A. *summa cum laude* in mathematics at Harvard College (class of 2015)
* Homeschooled through Venture School in San Ramon, CA (1998-2011)
* Part-time student at University of California, Berkeley (2007-2011)

**HONORS**

**Mathematical**

* NSF Graduate Research Fellowship Program award (2016-present)  
  *The GRFP gives a graduate student 3 years to pursue research unhindered by teaching duties.*
* Morgan Prize Honorable Mention (2015)  
  *The Morgan Prize is given annually to a U.S. undergraduate student who has done outstanding research.*
* Churchill Scholarship (2015)

*Funds one year of post-graduate study at Cambridge University.*

* Putnam Fellow (2011, 2012, 2013)  
  *North America’s premier undergraduate math competition. Five winners are designated Fellows.*
* International Mathematical Olympiad: gold medals (2010, 2011), silver medals (2008, 2009)  
  *The world’s premier high-school math competition. Gold medals are awarded to the top ~50 competitors.*
* USA Mathematical Olympiad top score (2008, 2010, 2011)
* Intel [now Regeneron] Science Talent Search national champion (2011)

*Won a $100K scholarship for my work “Continued fractions and linear transformations.”*

*For most original solution to a USA Mathematical Olympiad problem.*

**Non-mathematical**

* Harvard-Radcliffe Collegium Musicum Student Composition Competition winner (2015)  
  *My choral anthem “Hymn” was performed in a concert commemorating the Civil War and at Harvard’s graduation ceremony.*
* Scripps National Spelling Bee Champion (2007)

**ACTIVITIES AND WORK EXPERIENCE**

**Teaching and related activities**

* Taught at Princeton:
  + Multivariable calculus (spring 2020)
* Grading and office hours:
  + Intro. abstract algebra (fall 2019)
  + Introductory algebraic geometry (2015)
  + Linear algebra with proofs (2014)
  + Introductory point-set topology (2012)
* Tutored a student in high-school calculus (eight 1-hour sessions, summer 2017)
* Mathematical Olympiad Summer Program grader and instructor (2012, 2013, three weeks each)
* IdeaMath instructor (2013, two weeks; summers and/or winters 2009-2013)
* Berkeley Math Circle instructor (since 2010), Monthly Contest coordinator (2008-2015), participant (2006-2011)
* AwesomeMath Summer Program instructor (2010, 2011)

**PUBLICATIONS**

**Journal articles**

* On a remarkable identity in class numbers of cubic rings. J. Number Theory 176 (2017), pp. 302–332, DOI 10.1016/j.jnt.2016.12.002
* “Rings of small rank over a Dedekind domain and their ideals.” *Research in the Mathematical Sciences*, issue 3(1) (2016), pp. 1–36, DOI 10.1186/s40687-016-0054-0
* “Canonical rings of **Q**-divisors on **P**¹.” *Annals of Combinatorics* vol. 19, issue 4 (2015), pp. 765–784.
* “Continued fractions and linear fractional transformations.” *Integers* vol. 15 (2015), Paper A1, 23 pp.
* “Minimizing the Cayley transform of an orthogonal matrix by multiplying by signature matrices.” *Linear Algebra and Its Applications* (2014), pp. 97–103.
* “Degree asymptotics of the numerical semigroup tree.” *Semigroup Forum* vol. 87, issue 3 (2013), pp. 601–616.
* “Visibly irreducible polynomials over finite fields. To appear in *Amer. Math. Monthly.*

**Books**

* “The William Lowell Putnam Mathematical Competition 2001–2016: Problems, Solutions, and Commentary.” With Daniel Kane, Jonathan Kane, and Kiran Kedlaya. To appear from AMS Press.

**PRESENTATIONS**

* “[Reflection theorems for class numbers of binary forms](https://wcnt.files.wordpress.com/2019/12/wcnt2019-evan.pdf).” West Coast Number Theory, Dec. 19, 2019.
* “Singular moduli for real quadratic fields.” Princeton-IAS learning seminar “Singular moduli for real quadratic fields,” led by Jan Vonk. Nov 21, 2019.
* “New relations of Ohno-Nakagawa type.” Princeton learning seminar, led by students of Manjul Bhargava. Sep 27, 2019.
* “Poonen’s Bertini theorem.” Princeton-IAS learning seminar “Geometric applications of the Langlands correspondence,” led by Kiran Kedlaya. Mar 13, 2019.
* “Ohno-Nakagawa-type relations among class numbers.” Princeton seminar led by Manjul Bhargava. Oct 19, 2018.
* “A number theorist’s introduction to Galois cohomology.” Graduate Student Seminar, Princeton Univ, Sep 20, 2018.
* “Remarkable identities in the counting functions for cubic and quartic rings.” Graduate Student Seminar, Princeton Univ, Feb 9, 2017.
* “An identity on class numbers of cubic rings.” Number Theory Seminar, Univ of Cambridge, May 17, 2016.
* “Degree asymptotics of the numerical semigroup tree.” (*On my Duluth REU project.*) Joint Mathematics Meetings, Jan 11, 2013.
* “Permutation puzzles.” (*On my Duluth REU project.*) Joint Mathematics Meetings, Jan 7, 2011.
* “The Dynamics of Continued Fractions.” MathFest, Aug 7, 2010.