

# Scott Corry

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## Employment

- Professor of Mathematics, Lawrence University, 2019-
- Associate Professor of Mathematics, Lawrence University, 2013-19
- Assistant Professor of Mathematics, Lawrence University, 2007-13

## Education

- Ph.D. in mathematics, University of Pennsylvania, 2007 (Advisor: Florian Pop)
- B.A. in mathematics, Reed College, 2001

## Honors, Awards, Short-term Positions

- Director of Freshman Studies Program, Lawrence University, 2014-16
- Young Teacher Award, Lawrence University, 2011
- Visiting Fellow, Isaac Newton Institute for Math. Sciences, July-August 2009
- SAS Dissertation Fellow, University of Pennsylvania, 2006-2007
- Eugenio Calabi Scholar, UPenn Department of Mathematics, 2002-2007
- NSF Graduate Research Fellow, 2002-2006
- Dean's Scholar, University of Pennsylvania, 2005
- Good Teaching Awards, UPenn Dept. of Mathematics, Fall 2004, Spring 2005
- Phi Beta Kappa, Reed College, 2001
- Barry M. Goldwater Scholar, 2000

## Teaching

- Courses at Lawrence: Calculus I, II, III, Differential Equations with Linear Algebra, Applied Combinatorics, Probability, Foundations of Algebra, Foundations of Analysis, Linear Algebra, Topics in Geometry, Rings and Fields, Topics in Analysis, Topics in Algebra & Combinatorics, Number Theory, Freshman Studies I, II
- Tutorials at Lawrence: Elementary Number Theory, Commutative Algebra, Algebraic Curves, Putnam Problems, Linear Algebra, Quantum Computing, *Gödel, Escher, Bach*

- Independent Studies at Lawrence: Area in Euclidean Geometry, Riemann Surfaces, Graphs and Riemann Surfaces, Differential Geometry, Group Theory, Combinatorial Game Theory, Group Theory and Physics, Primes of the Form  $x^2 + ny^2$ , Galois Theory, Symmetry in Quantum Mechanics, Symmetries of Finite Graphs, Analytic Number Theory, Algebraic Geometry, The Kronecker-Weber Theorem, Linear Programming & Economic Analysis, Module Theory, Cryptography on Graphs, Topics in Linear Algebra, Gauss's Theory of Surfaces, Model Categories, Mathematical Statistics, Chip-firing on Complexes, Quantum Field Theory

### Books

- *Divisors and Sandpiles: An Introduction to Chip-Firing* (with D. Perkinson), American Mathematical Society, 2018.
- *Symmetry and Quantum Mechanics*, Monographs and Research Notes in Mathematics, Chapman & Hall / CRC, 2017.

### Publications

- *Counting arithmetical structures on paths and cycles* (with B. Braun, H. Corrales, L.D. García Puente, D. Glass, N. Kaplan, J.L. Martin, G. Musiker, C.E. Valencia), Discrete Mathematics, **341**, No. 10 (2018), 2949-2963.
- *Maximal harmonic group actions on finite graphs*, Discrete Mathematics, **338**, No. 5 (2015), 784-792.
- *Harmonic Galois theory for finite graphs*, in "Galois-Teichmüller Theory and Arithmetic Geometry" (H. Nakamura, F. Pop, L. Schneps, A. Tamagawa eds.), Advanced Studies in Pure Mathematics, **63** (2012), 121-140.
- *Genus bounds for harmonic group actions on finite graphs*, Int. Math. Res. Notices, **2011**, No. 19 (2011), 4515-4533.
- *Galois covers of the open  $p$ -adic disc*, manuscripta math., **131**, No. 1-2 (2010), 43-61.
- *The pro- $p$  Hom-form of the birational anabelian conjecture* (with F. Pop), J. Reine Angew. Math (Crelle's Journal), **628** (2009), 121-127.
- *A Hom-form of the pro- $p$  birational anabelian conjecture*, extended abstract of talk at the Oberwolfach workshop "Arithmetic and Differential Galois Groups," published in Mathematisches Forschungsinstitut Oberwolfach Report No. 26/2007.
- *Arithmetic and geometry of the open  $p$ -adic disc*, Ph.D. dissertation, University of Pennsylvania, May 2007.
- *Hilbert functions of finite group orbits: abelian and metacyclic groups*, Senior thesis, Reed College, May 2001.

### Talks

- *Chip-firing Games on Graphs*, March 2014 Colloquium, St. Norbert College

- *Chip-firing Games on Graphs*, February 2014  
Science Hall Colloquium, Lawrence University
- *Harmonic Group Actions, Genus Bounds, and Combinatorial Maps*, January 2014  
Special Session on Tropical and Nonarchimedean Analytic Geometry at the AMS/MAA Joint Meetings, Baltimore
- *Harmonic Group Actions on Finite Graphs*, July 2013  
Generalizations of Chip-Firing and the Critical Group, American Institute of Mathematics, Palo Alto
- *Graph-theoretic Hurwitz Groups*, March 2013  
Combinatorics Seminar, University of Minnesota
- *Finite Graphs and Riemann Surfaces: Hurwitz groups and graphs*, November 2012  
Colloquium, Reed College
- *Symmetry: an example from graph theory*, November 2011  
Science Hall Colloquium, Lawrence University
- *Harmonic Galois theory for finite graphs*, February 2011  
Galois Seminar, University of Pennsylvania
- *Galois branched covers of finite graphs*, October 2010  
Galois-theoretic Arithmetic Geometry, International Inst. for Advanced Study (Kyoto)
- *The pro- $p$  Hom-form of the birational anabelian conjecture*, August 2009  
Anabelian Seminar, Isaac Newton Institute for Math. Sciences (Cambridge, UK)
- *Galois Theory and Rational Points on Curves*, April 2009  
Colloquium, University of Wisconsin – Oshkosh
- *Arithmetic and Geometry:  $\frac{2}{7}$  of the liberal arts*, March 2008  
Mortar Board “First Chance / Last Chance Lecture”, Lawrence University
- *A Hom-form of the pro- $p$  birational anabelian conjecture*, May 2007  
Oberwolfach Workshop “Arithmetic and Differential Galois Groups”
- *Galois Theory: To Infinity and Beyond*, February 2007  
Earlham College
- *Galois Theory: To Infinity and Beyond*, January 2007  
Lawrence University
- *Galois covers of the open  $p$ -adic disc*, January 2007  
Special Session on Arithmetic Geometry at the AMS/MAA Joint Meetings, New Orleans
- *Galois covers of the open  $p$ -adic disc*, December 2006  
Galois Seminar, University of Pennsylvania (2 talks)
- *Arithmetic and geometry of the open  $p$ -adic disc*, April 2006  
Galois Workshop, University of Pennsylvania

- *What is Galois Theory?*, April 2006  
Colloquium, Lycoming College

#### **Conferences Attended**

- AMS/MAA Joint Meetings, San Diego, January 2018
- Topological Data Analysis: Theory and Applications, Macalester College, June 2017
- AMS/MAA Joint Meetings, Atlanta, January 2017
- Sandpile Groups, BIRS-CMO (Oaxaca), November 2015
- AMS/MAA Joint Meetings, Baltimore, January 2014
- Generalizations of Chip-Firing and the Critical Group, American Institute of Mathematics, July 2013
- Galois-theoretic Arithmetic Geometry, IAS (Kyoto), October 2010
- Introductory Workshop: *Non-Abelian Fundamental Groups in Arithmetic Geometry*, Isaac Newton Institute for Math. Sciences (Cambridge, UK), July 2009
- Miniconference on Pro- $p$  Groups in Number Theory, University of Wisconsin – Madison, April 2008
- P-adic Methods and Rational Points, Renyi Institute (Budapest), May 2007
- Arithmetic and Differential Galois Groups, Oberwolfach, May 2007
- AMS/MAA Joint Meetings, New Orleans, January 2007
- Galois Workshop, University of Pennsylvania, April 2006
- Deligne's 61st Birthday Conference, Institute for Advanced Study, October 2005
- Arizona Winter School, University of New Mexico, March 2005  
Leila Schneps working group on multizeta values

#### **Professional Memberships**

- American Mathematical Society (AMS)
- Association for Women in Mathematics (AWM)

#### **Professional Service**

- Referee for journals such as *Advances in Applied Mathematics*, *Ars Mathematica Contemporanea*, *Discrete Mathematics*, and *European Journal of Combinatorics*.
- Reviewer for *Zentralblatt MATH*