

Andrew Gainer-Dewar

Education

- 2007–2012 **Ph.D. (Mathematics)**, *Brandeis University*, Waltham, MA.
Thesis: “ Γ -species, quotients, and graph enumeration”
Supervisor: Ira M. Gessel
- 2003–2007 **B.S. (Mathematics) & B.A. (Philosophy)**, *Mercer University*, Macon, GA.

Professional appointments

- 2012–2014 **Visiting asst. prof. of mathematics**, *Carleton College*, Northfield, MN.

Research interests

Enumerative combinatorics, combinatorial graph theory, combinatorial species.

Professional memberships and recognition

- 2013–2014 **MAA National Project NExT Fellow**.
- 2013– **Member, Mathematical Association of America**.
- 2008– **Member, American Mathematical Society**.

Teaching

- 2012–2014 **Carleton College**, 5/yr.
Calculus I, Calculus II, Linear Algebra, Graph Theory (indep. study)
“The Mathematics of Democracy” (first-year seminar)
- 2008–2010 **Brandeis University (graduate instructor)**, 2/yr.
Precalculus, Calculus I, Calculus II, Linear Algebra

Undergraduate scholarship supervised

- 2013–2014 **Boolean numbers and graph-induced sequences**, *Carleton*.
Four students, ongoing
- 2012–2013 **On the species of bipartite point-determining graphs**, *Carleton*.
Four students, independent original research

Presentations and talks

Research (invited)

- 2014 **Γ -species and the enumeration of unlabeled bipartite blocks**.
- St. Olaf College Math, Statistics, and Computer Science research seminar
 - Minnesota State University Mankato mathematics seminar
 - University of Minnesota combinatorics seminar

Research (other)

- 2014 **Enumeration of bipartite graphs and blocks**, *Joint Mathematics Meetings*, Baltimore.
- 2013 **Γ -species and the enumeration of k -trees**, *Joint Mathematics Meetings*, San Diego.
- 2012 **Contemporary graph enumeration and k -trees**, *Brandeis*, Ph.D. defense.

Undergraduate

- 2014 **The mathematics of democracy**, *Carleton*.
- 2013 **Making strategy count: combinatorial game theory and the surreal numbers**, *Carleton*.
- 2012 **Arrow's Theorem and the impossibility of democracy**, *Carleton & Brandeis*.

Pedagogy

- 2014 **A&I: not just for humanists anymore**, *Carleton Learning and Teaching Center*, panelist.
Panel discussion of approaches for running first-year seminars outside the humanities

Service

- 2013– **Department L^AT_EX workshop developer and coordinator**, *Carleton*.
- 2013– **Department newsletter “Problem of the Week” editor**, *Carleton*.
- 2013 **JMM-2014 panel sessions coordinator**, *Project NExT*.
- 2013 **Sophomore writing portfolio reader**, *Carleton*.
- 2013– **Contributor to Sage computer algebra system**, trac: agd.
- 2013– **JMM Undergraduate Poster Session Judge**.
- 2012– **Department social coordinator**, *Carleton*.
- 2012–2013 **Math GRE preparation coordinator**, *Carleton*.
- 2008–2012 **Graduate student representative and social coordinator**, *Brandeis*.

Publications and preprints

- [1] **2014**. Γ -species and quotient enumeration. Preprint. arXiv: 1401.6202 [math.CO].
- [2] **2013**. Enumeration of labeled and unlabeled k -gonal and polygonal 2-trees and succulents by vertices. Preprint. arXiv: 1309.4481 [math.CO].
- [3] **2013a** (with Ira Gessel). Counting unlabeled k -trees. Submitted to the Journal of Combinatorial Theory, Series A. arXiv: 1309.1429 [math.CO].
- [4] **2013b** (with Ira Gessel). Enumeration of bipartite graphs and bipartite blocks. Submitted to the Electronic Journal of Combinatorics. arXiv: 1304.0139 [math.CO].
- [5] **2012a**. “ Γ -species and the enumeration of k -trees”. In: *The Electronic Journal of Combinatorics* 19.4, P45. arXiv: 1208.5993 [math.CO].
- [6] **2012b**. “ Γ -species, quotients, and graph enumeration”. PhD thesis. Brandeis University. arXiv: 1204.1402 [math.CO].