# Andrew Gainer-Dewar

## Education

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|---|---|
| 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

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

## Research interests

Enumerative combinatorics, combinatorial graph theory, combinatorial species, computer algebra.

## Professional memberships and recognition

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

## Teaching

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|---|---|
| 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)

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| 2014 | **Γ-species and the enumeration of unlabeled bipartite blocks**, *U. Minnesota combinatorics seminar*, planned. |

### Research (other)

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| 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. |

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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 LaTeX workshop developer and coordinator**, *Carleton.*

2013–    **Department newsletter "Problem of the Week" editor**, *Carleton.*

2013    **JMM-2014 panel sessions coordinator**, *Project NExT.*

2013    **Sophmore 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**. *$\Gamma$-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**. "$\Gamma$-species and the enumeration of $k$-trees". In: *The Electronic Journal of Combinatorics* 19.4, P45. arXiv: 1208.5993 [math.CO].

[6]    **2012b**. "$\Gamma$-species, quotients, and graph enumeration". PhD thesis. Brandeis University. arXiv: 1204.1402 [math.CO].