

# Curriculum Vitae

## STEPHEN GRIFFETH

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Citizenship: US

Date of CV: October 2008

### Employment

2006 – Visiting Assistant Professor, University of Minnesota

### Education

2006 Ph.D., University of Wisconsin–Madison, directed by Arun Ram. Dissertation: “Rational Cherednik algebras and coinvariant rings”

2000 B.A. magna cum laude, with distinction in Mathematics from Carleton College

### Research interests

Combinatorics in representation theory and geometry; complex reflection groups, Hecke algebras, and homogeneous spaces.

### Publications

#### Peer-reviewed journal articles

1. *Towards a combinatorial representation theory for the rational Cherednik algebra of type  $G(r, p, n)$* , to appear in Proceedings of the Edinburgh Mathematical Society, arXiv:math/0612733
2. *Jack polynomials and the coinvariant ring of  $G(r, p, n)$* , to appear in Proceedings of the American Mathematical Society, arXiv:0806.3292
3. (with A. Ram), *Affine Hecke algebras and the Schubert calculus*, European J. Combin. 25 (2004), no. 8, 1263–1283

#### Submitted journal articles

4. (with Ezra Miller and Dave Anderson) *Positivity and Kleiman transversality in equivariant  $K$ -theory of homogeneous spaces*, arXiv:0808.2785
5. *On some orthogonal functions generalizing Jack polynomials*, arXiv:0707.0251

#### Articles in progress

6. (with A. Ram), *From double affine Hecke algebras to rational Cherednik algebras*
7. *Diagonal coinvariants and  $q$ -Catalan numbers for complex reflection groups*
8. *Combinatorics of standard modules for the rational Cherednik algebra of type  $G(r, 1, n)$*

**Presentations**

- 2008 September University of Virginia algebra seminar  
 “The submodule structure of standard modules for the rational Cherednik algebra”
- 2008 September University of Virginia topology seminar  
 “Positivity in equivariant K-theory of generalized flag varieties”
- 2008 June University of California, Berkeley  
 Conference on geometric and combinatorial representation theory  
 “The submodule structure of standard modules for the rational Cherednik algebra ”
- 2008 March AMS sectional meeting  
 Baton Rouge, LA  
 Special session on geometric and combinatorial representation theory  
 “The submodule structure of standard modules for the rational Cherednik algebra ”
- 2008 February University of Minnesota combinatorics seminar  
 “A combinatorial model for representations of rational Cherednik algebras”
- 2007 January University of California–Riverside representation theory seminar  
 “Finite dimensional modules for rational Cherednik algebras”
- 2006 September University of Minnesota combinatorics seminar  
 “Rational Cherednik algebras and descent bases for coinvariant rings”
- 2005 April University of Wisconsin Combinatorics seminar  
 “Double affine Hecke algebras and orthogonal polynomials.”
- 2005 February University of Wisconsin Lie theory seminar  
 “An introduction to algebraic groups and homogeneous spaces.”
- 2004 February University of Wisconsin Combinatorics seminar  
 “Schubert calculus, Hecke algebras, and the Yang-Baxter equation”
- 2003 April University of Wisconsin group theory seminar  
 “Matrix groups have large abelian subgroups”
- 2003 March University of Wisconsin Lie Theory seminar  
 “A positivity conjecture for the T-equivariant K-Theory of flag varieties.”
- 2002 October University of Wisconsin Combinatorics seminar  
 “Alternating sign matrices and the  $K$ -theory of flag varieties”

**Refereeing and reviewing service**

Journals refereed for:

International Mathematics Research Notices  
 Journal of Algebraic Combinatorics  
 Journal of Combinatorial Theory, Series A

**Teaching**

Courses taught (at Minnesota unless otherwise indicated)

- 2008 Spring Number Theory and Cryptology (Math 5248)
- 2007 Fall Topics in Combinatorics: Double affine Hecke algebras and Macdonald polynomials (Math 8680)
- 2007 Spring Finite Mathematics (Math 1131)
- 2006 Fall Enumerative combinatorics (Math 5705)
- 2002–2006 Graduate Student Instructor (University of Wisconsin– Madison): Calculus I,II,III and discrete mathematics.

**Undergraduate students mentored**

- Fall 2007 Moua Neng, senior thesis on implementation of RSA encryption.
- Fall 2008 Troy Billings, senior thesis on implementation of elliptic curve cryptography

**Seminars organized**

- 2007–2008 Combinatorics seminar (at University of Minnesota)
- 2008 Fall Cohomology of homogeneous spaces and toric varieties (at University of Minnesota)

**References**

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