

Curriculum Vita of George McNinch

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Personal data

Date of birth 31 January, 1968.
Citizenship United States of America

Higher Education

1996 Ph.D. in Mathematics, University of Oregon (Eugene, OR).
Advisor: Gary M. Seitz.
1990 B.S. in Mathematics and Physics, Samford University (Birmingham Alabama).

Academic Employment

2006 – present Associate Professor, Tufts University.
2004 – 2006 Assistant Professor, Tufts University (Medford, MA).
1996 – 2004 Assistant Professor, University of Notre Dame (South Bend, IN).
1990 – 1996 Graduate Teaching Fellow, University of Oregon (Eugene, OR).

Grants and Awards

2008 – 2010 Principal investigator, National Security Agency grant “Reductive Groups in Positive Characteristic”.
2004 – 2008 Principal investigator, National Science Foundation Grant DMS04 37482.
1999 – 2002 Principal investigator, National Science Foundation Grant DMS99 70301.

Service and professional memberships

2008 Curriculum committee chair (spring 2008) and co-chair (fall 2008), Tufts Univ. math dept.

2006 – 2007	Chaired the search committee for “Algebraic Groups” 3-year position, Tufts Univ. math department.
Sept 2006	Served as international expert member on the Ph.D. committee of Anne Lund Christophersen at Århus Universitet, Denmark.
March 2006	Organizer for a special session on <i>Algebraic Groups</i> , AMS sectional meeting, April 2006, University of New Hampshire (Durham).
2004 – present	Served on the graduate committee of Tufts University mathematics department .
2005 – present	Pre-major advising, Tufts University, graduating classes of 2008 and 2009.
2005 – 2010	Tufts University committee on Undergraduate Admissions and Financial Aid.
April 2000	Organizer for a special session on <i>Representations of Groups and Related Objects</i> , AMS sectional meeting, April 2000, University of Notre Dame (South Bend IN).
1997 – present	Referee and review work (Math Reviews, NSF, NSA, Mathematics journals)
1996 – present	Member of the American Mathematical Society.

Invited Lectures and workshops

Apr 2009	Invited Speaker in the Special Session on “Brauer Groups, Quadratic Forms, Algebraic Groups, and Lie Algebras” at the American Math Society Spring Southeastern Section Meeting in Raleigh, NC.
Dec 2008	Seminar speaker, GLNT (“Group Theory, Lie Theory, Number Theory”) Seminar, University of Michigan.
Oct 2008	Invited Speaker in the Special Session on “Computation in Modular Representation Theory at the American Math Society Fall Central Section Meeting in Kalamazoo, Michigan.
Jun-Jul 2008	Seminar speaker and 3 weeks as visiting professor, Institut de Géométrie, Algèbre et Topologie (IGAT) de l’École Polytechnique Fédérale de Lausanne (EPFL) in Switzerland.
Aug 2007	Algebra seminar speaker, University of Southern California.
May-June 2007	Invited speaker, Banff International Research Station for Mathematical Innovation and Discovery workshop <i>Algebraic Lie theory</i> .

May 2007 Invited participant, Oberwolfach workshop on *Algebraic Groups*.

Jan 2007 Invited speaker, Special Session on "Cohomology and Representation Theory", AMS national meeting, New Orleans LA.

Sept 2006 Everytopic mathematics seminar, Brandeis University.

Sept 2006 Algebra seminar speaker, Århus Universitet, Denmark.

Jun 2006 Geometry - Algebra - Singularities - Combinatorics Seminar speaker, Northeastern University.

Nov 2005 Algebra seminar speaker, University of Massachusetts, Amherst.

Oct 2005 Tufts University mathematics department colloquium speaker.

June 2005 Invited speaker and visiting professor, Conference on Algebraic Groups and Finite Subgroups at the Centre Inter-facultaire Bernoulli, École Polytechnique Fédérale de Lausanne, Switzerland.

Jan 2005 Tufts University mathematics department colloquium speaker.

Jan 2005 Invited speaker, special session on *Modular Representation Theory of Finite and Algebraic Groups*, AMS national meeting, Atlanta GA.

July 2004 Invited speaker, AMS Summer Research Conference on *Representations of Algebraic Groups, Quantum Groups, and Lie Algebras*, Snowbird Utah.

April 2004 Automorphic forms – representation theory seminar speaker, Purdue University.

Mar 2004 Invited speaker, conference on *Groups and Representations*, University of Oregon, Eugene.

Jan 2004 Group Theory and Lie Theory Seminar speaker, University of Michigan, Ann Arbor.

Nov 2003 Colloquium speaker, Wayne State University, Detroit Michigan.

May 2003 Invited speaker, meeting on *Algebraic Groups, Lie Algebras and their Representations*, University of Birmingham, UK.

Mar 2003 Invited speaker, *Workshop on Geometric Representation and Invariant Theory*, London Math Society Regional Meeting, University of Manchester, UK.

Feb 2003 Lie Theory Seminar speaker, University of Wisconsin at Madison.

Feb 2003 Lie Groups Seminar speaker, Massachusetts Institute of Technology.

May 2002	Algebra Seminar speaker, EPFL, Lausanne, Switzerland.
Mar 2002	Algebra Seminar speaker, University of Massachusetts-Amherst.
Jun 2001	Invited speaker, meeting on <i>Algebraic Groups</i> , Bielefeld, Germany.
Mar 2001	Invited participant, Oberwolfach workshop on <i>Algebraic Groups</i> .
Oct 2000	Algebra Seminar speaker, Aarhus University, Aarhus, Denmark.
Mar 2000	Algebra Seminar speaker, Wayne State University, Detroit Michigan.
Oct 1999	Algebra Seminar speaker, University of Wisconsin at Madison.
Jun 1999	Algebra seminar speaker, California Institute of Technology.
May 1999	Invited speaker, special session on Representation Theory and Geometry, Canadian Math Society meeting, St. John's, Newfoundland.
Jul 1998	Seminar speaker during the research period on Algebraic Representation Theory, Aarhus University, Denmark.
May 1998	Speaker at the CBMS meeting on "Blocks of finite reductive groups, Deligne-Lusztig varieties, and complex reflection groups," University of North Texas.
Mar 1998	Invited speaker, Special session on Representations of Algebraic Groups at the AMS Sectional Meeting, Manhattan, KS.
Nov 1998	Invited speaker at the joint IUPUI – Indiana University – University of Illinois Champaign-Urbana Algebra Day conference.
June 1997	Speaker at the NATO Advanced Study Institute on "Representation Theory of Algebraic Groups and Related Finite Groups" at the Isaac Newton Institute for Mathematical Sciences, Cambridge, UK.
Nov 1996	Colloquium speaker at the University of North Texas, Denton, Texas.

Publications (refereed):

- [1] Paul Levy, George J. McNinch, and Donna M. Testerman, *Nilpotent subalgebras of semisimple Lie algebras*, C. R. Acad. Sci. Paris **347** (2009), 477–482.
- [2] George J. McNinch and Donna M. Testerman, *Nilpotent centralizers and Springer isomorphisms*, Journal of Pure and Applied Algebra **213** (2009), 1346–1363. arXiv:0805.2574.

- [3] George J. McNinch, *The centralizer of a nilpotent section*, Nagoya J. Math **190** (2008), 129-181. arXiv:math.RT/0605626.
- [4] George J. McNinch and Donna M. Testerman, *Completely reducible $SL(2)$ -homomorphisms*, Transactions of the AMS **359** (2007), no. 9, 4489–4510. arXiv:math.RT/0510377.
- [5] George J. McNinch, *Completely reducible Lie subalgebras*, Transformation Groups **12** (2007), 127–135. arXiv:math.RT/0509590.
- [6] ———, *On the centralizer of the sum of commuting nilpotent elements*, Journal of Pure and Applied Algebra (Volume in honor of E. Friedlander’s 60th birthday) **206** (2006), 123-140. arXiv:math.RT/0412283.
- [7] ———, *Optimal SL_2 -homomorphisms*, Commentarii Mathematici Helvetici **80** (2005), 391–426. arXiv:math.RT/0309385.
- [8] ———, *Nilpotent orbits over ground fields of good characteristic*, Mathematische Annalen **329** (2004), 49–85. arXiv:math.RT/0209151.
- [9] George J. McNinch and Eric Sommers, *Component groups of unipotent centralizers in good characteristic*, Journal of Algebra (Volume in honor of R. Steinberg’s 80th birthday) **260** (2003), 323–337. arXiv:math.RT/0204275.
- [10] George J. McNinch, *Sub-principal homomorphisms in positive characteristic*, Mathematische Zeitschrift **244** (2003), 433–455. arXiv:math.RT/0108140.
- [11] ———, *Faithful representations of $SL(2)$ over truncated Witt vectors*, Journal of Algebra **26** (2003), 606–618. arXiv:math.RT/0007056.
- [12] ———, *Abelian Unipotent Subgroups of Reductive Groups*, Journal of Pure and Applied Algebra (2002), 269–300. arXiv:math.RT/0007056.
- [13] ———, *The second cohomology of small irreducible modules for simple algebraic groups*, Pacific Journal of Mathematics (2002), 459–472. arXiv:math.RT/0006105.
- [14] ———, *Semisimplicity of exterior powers of simple representations of groups*, Journal of Algebra **225** (2000), 646–666.
- [15] ———, *Filtrations and positive characteristic Howe duality*, Mathematische Zeitschrift **235** (2000), 651–685.
- [16] ———, *Semisimple modules for finite groups of Lie type*, Journal of the London Math Society **60** (1999), 771–792.
- [17] ———, *Dimensional criteria for semisimplicity of representations*, Proceedings of the London Mathematical Society **76** (1998), 95–149.

Other publications (preprints, notes, and surveys)

- [1] George J. McNinch, *The centralizer of a subgroup of multiplicative type*. manuscript in preparation.
- [2] George J. McNinch, *Adjoint Jordan blocks*, available at arXiv:math.RT/0207001. preprint 2002.
- [3] ———, *Semisimplicity in positive characteristic*, Representation Theory of Algebraic Groups and Related Finite Groups, 1998.

Medford, MA, August 13, 2009