

Curriculum Vita of George McNinch

Address

Mail Department of Mathematics, Tufts University, 503 Boston Avenue, Medford MA
02155 USA

Phone +1 617 627-6210

Fax +1 617 627-3966

Email george.mcninch@tufts.edu, mcninchg@member.ams.edu

Web www.tufts.edu/~gmcnin01

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

2011 – 2013 Principal investigator, National Security Agency grant.

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

2011-2012 Served on the Tufts University Faculty Research Awards Committee.

Jan 2012 Together with R. Skip Garibaldi (Emory University), was a co-organizer of a special session on “Linear algebraic groups: their arithmetic, geometry, and representations” at the Joint Mathematics Meeting of the American Math Society (Boston MA).

2009 – 2010 Chair of the University Committee on Admissions and Financial Aid, Tufts University.

2008 – 2010 Curriculum committee chair (2009-2010, 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 – 2009; 2011 –	Served on the graduate committee of Tufts University mathematics department .
2005 – 2007	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, various mathematics journals)
1996 – present	Member of the American Mathematical Society.

Invited Lectures and workshops

May Jun 2011	Participant in the week-long workshop “Ramification in Algebra and Geometry” at Emory University, Atlanta GA.
Jan 2011	Invited Speaker in the Special Session on “Lie Algebras, Algebraic Groups, and Related Topics” at the AMS-MAA Joint Mathematics Meeting in New Orleans, Louisiana.
Nov 2010	Invited seminar speaker, Massachusetts Institute of Technology.
Oct 2010	Invited seminar speaker, Emory University (Atlanta).
Oct 2010	Invited seminar speaker, University of Georgia (Athens GA).
Sept 2010	Invited seminar speaker, University of Michigan.
Sept 2010	Invited seminar speaker, Boston College.
Sept 2009	Visitor in the Forschungsinstitut für Mathematik at the ETH Zurich.
Aug-Sep 2009	Invited speaker in the conference on “Algebraic Groups and Invariant Theory” at the Centro Stefano Franscini in Ascona, Switzerland.
Mar 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, North Carolina.
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 *Algebraic Lie theory*.

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 Interfacultaire 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 *Algebraic Groups*, Bielefeld, Germany.

Mar 2001 Invited participant, Oberwolfach workshop on *Algebraic Groups*.

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] George J. McNinch, *Levi decompositions of a linear algebraic group*, Transformation Groups **15** (2010), 937–964. Special volume celebrating V.V. Morozov.
- [2] Paul Levy, George J. McNinch, and Donna M. Testerman, *Nilpotent subalgebras of semisimple Lie algebras*, C. R. Acad. Sci. Paris, Ser. I **347** (2009), 477–482.
- [3] 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.
- [4] George J. McNinch, *The centralizer of a nilpotent section*, Nagoya J. Math **190** (2008), 129–181. arXiv:math.RT/0605626.
- [5] 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.
- [6] George J. McNinch, *Completely reducible Lie subalgebras*, Transformation Groups **12** (2007), 127–135. arXiv:math.RT/0509590.
- [7] ———, *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.
- [8] ———, *Optimal SL_2 -homomorphisms*, Commentarii Mathematici Helvetici **80** (2005), 391–426. arXiv:math.RT/0309385.
- [9] ———, *Nilpotent orbits over ground fields of good characteristic*, Mathematische Annalen **329** (2004), 49–85. arXiv:math.RT/0209151.
- [10] 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.
- [11] George J. McNinch, *Sub-principal homomorphisms in positive characteristic*, Mathematische Zeitschrift **244** (2003), 433–455. arXiv:math.RT/0108140.
- [12] ———, *Faithful representations of $SL(2)$ over truncated Witt vectors*, Journal of Algebra **26** (2003), 606–618. arXiv:math.RT/0007056.
- [13] ———, *Abelian Unipotent Subgroups of Reductive Groups*, Journal of Pure and Applied Algebra (2002), 269–300. arXiv:math.RT/0007056.
- [14] ———, *The second cohomology of small irreducible modules for simple algebraic groups*, Pacific Journal of Mathematics (2002), 459–472. arXiv:math.RT/0006105.
- [15] ———, *Semisimplicity of exterior powers of simple representations of groups*, Journal of Algebra **225** (2000), 646–666.
- [16] ———, *Filtrations and positive characteristic Howe duality*, Mathematische Zeitschrift **235** (2000), 651–685.
- [17] ———, *Semisimple modules for finite groups of Lie type*, Journal of the London Math Society **60** (1999), 771–792.
- [18] ———, *Dimensional criteria for semisimplicity of representations*, Proceedings of the London Mathematical Society **76** (1998), 95–149.

Other publications (preprints, notes, and surveys)

- [1] ———, *On the Descent of Levi Factors*. 2012; submitted for publication.
- [2] Charles Hague and George J. McNinch, *Some good-filtration subgroups of simple algebraic groups*. 2012; submitted for publication.
- [3] George J. McNinch, *Linearity for actions on vector groups*. 2012; submitted for publication.
- [4] ———, *Levi factors of the special fiber of a parahoric group scheme and tame ramification*. 2012; submitted for publication.
- [5] ———, *Adjoint Jordan blocks*, available at [arXiv:math.RT/0207001](https://arxiv.org/abs/math/0207001). unpublished manuscript 2002.
- [6] ———, *Semisimplicity in positive characteristic*, Representation Theory of Algebraic Groups and Related Finite Groups, 1998.

Medford, MA, May 9, 2012