

Lei Zhao

CONTACT INFORMATION

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RESEARCH INTERESTS

(Modular) Representation theory of Lie algebras, Lie superalgebras and algebraic groups.

EDUCATION

University of Virginia, Charlottesville, Virginia
Ph.D. Candidate, Mathematics, August 2005 (expected graduation date: May 2010)
• Advisor: Prof. Weiqiang Wang

Tsinghua University, Beijing, P. R. China

B.S., Mathematics, July, 2004

ACADEMIC EXPERIENCE

University of Virginia, Charlottesville, Virginia

Graduate Student

August, 2005 - present

Includes current Ph.D. research, Ph.D. level coursework and research/consulting projects.

Instructor, Applied Calculus I and II

August 2006 - present

Teaching Calculus for Business, Biology and Social Science majors to a class of 40 undergraduate students. Responsible for lecturing, assigning and grading homework, grading exams and assigning final letter grades.

Teaching Assistant, ODEs and Art of Mathematical Thinking

August 2005- May 2006

Conducted weekly discussion sections for class of 40 undergraduate students. Responsible for assigning and grading weekly quizzes and for grading exams.

GRANTS AND FELLOWSHIPS AWARDED

1. **Mathematics Department Research Fellowship**, University of Virginia, Spring 2009.
Relieved of teaching duties for one semester to concentrate in completing dissertation work.
2. **Departmental travel support**, Dept.t of Math., University of Virginia, Fall 2008.
Received partial support to attend January 2009 AMS-SMS Meeting in Shanghai, China.
3. **Huskey Travel Fellowship**, University of Virginia, Fall 2008.
Awarded partial support to attend 2009 Joint Mathematics Meetings in Washington, D.C..
4. **Mathematical Sciences Research Institute (MSRI) travel support**, Spring 2008.
Received partial support from MSRI to attend March 2008 workshop on Topics in Combinatorial Representation Theory.
5. **Departmental travel support**, Dept. of Math., University of Virginia, Spring 2008.
Awarded funds to attend March 2008 workshop on Topics in Combinatorial Representation Theory.

PAPERS

1. Representations of Lie Superalgebras in Prime Characteristic I, (with Weiqiang Wang), 25 pages, 2008, arXiv:0808.0046, Proc. London Math. Soc. (2009), to appear.
2. Representations of Lie Superalgebras in Prime Characteristic II: The Queer Series, (with Weiqiang Wang), 26 pages, 2008, Submitted for publication.
3. Representations of Lie Superalgebras in Prime Characteristic III: Families of Associative Superalgebras, 2008, (preprint).

4. Representations of Lie Superalgebras in Prime Characteristic IV: An Equivalence of Typical Blocks, 12 pages (approximately), 2009, (preprint).

CONFERENCE
PRESENTATIONS

1. Invited speaker, *Representations of Lie superalgebras in prime characteristic*, AMS National Meeting, Washington, D.C., Special Session “Representation Theory of Lie Algebras and Algebraic Groups”, January 5-8, 2009.
2. Invited speaker, *Representations of Lie superalgebras in prime characteristic*. 1045th AMS-SMS Meeting in Shanghai, China, Special Session on Representations of Groups and Algebras, December 17-21, 2008

SEMINAR TALKS

1. *Modular representations of Lie (super)algebras*. Algebra Seminar, Morningside Center of Mathematics, Chinese Academy of Science, Beijing, China, December 2008.
2. *Kac-Weisfeiler conjecture for Lie superalgebras in prime characteristic: formulation and proof*. Algebra Seminar, University of Virginia, February 2008.
3. *Modular representations of Lie superalgebras*. Algebra Seminar, University of Virginia, May 2007.
4. *Representations of finite-dimensional algebras via quivers*. Algebra Seminar, University of Virginia, October 2005.

CONFERENCES AND
WORKSHOPS
ATTENDED/ING

1. Workshop and summer school on Lie theory and representation theory II, East China Normal University, Shanghai, July 13-31, 2009.
2. Summer School and Conference in Geometric Representation Theory and Extended Affine Lie Algebras, University of Ottawa, June 15-July 3, 2009.
3. AMS National Meeting, Washington, D.C., Special Session “Representation Theory of Lie Algebras and Algebraic Groups”, January 5-8, 2009.
4. Special Session on Representations of Groups and Algebras, 1045th AMS-SMS Meeting in Shanghai, China, December 17-21, 2008
5. Workshop “Topics in Combinatorial Representation Theory”, MSRI, Berkeley, March 17–21, 2008.
6. Summer School and Workshop in Lie Theory and Representation Theory, East China Normal University, Shanghai, July 10-25, 2006.
7. NSF/CBMS conference on Cluster Algebras and Applications, Raleigh, June 13-17, 2006.
8. Geometry and Representation Theory Conference (in honor of Lusztig’s 60th birthday), M.I.T., May 30-June 3, 2006.