

JULIA PEVTSOVA

Department of Mathematics
University of Washington
Box 354350, Seattle WA 98152
Tel: (206) 543-6889
Fax: (206) 543-0397

julia@math.washington.edu
<http://www.math.washington.edu/~julia>

EDUCATION

- Ph.D., **Northwestern University** June 2002
Mathematics
- B.S., **Saint-Petersburg State University, Russia** June 1997
Mathematics and Education

ACADEMIC POSITIONS

- **University of Washington**, Seattle, WA 2011 –
Associate Professor
- **University of Washington**, Seattle, WA 2008 – 2011
Assistant Professor
- **Mathematical Sciences Research Institute**, (MSRI), Berkeley, CA Spring 2008
Program on *Representation Theory of Finite Groups and Related Topics*
Postdoctoral Fellow
- **University of Washington**, Seattle, WA 2005 – 2008
Acting Assistant Professor
- **University of Oregon**, Eugene, OR 2003 – 2005
Postdoctoral Fellow
- **Institute for Advanced Study**, (IAS), Princeton, NJ 2002 – 2003
Member

AWARDS AND FELLOWSHIPS

- NSF career award DMS-0953011 2010 – 2015
- NSF grant DMS-0800940 2008 – 2011
- NSF grant DMS-0629156 2006 – 2008
- NSF grant DMS-0500946 2005 – 2006
- Northwestern University Department of Mathematics Best Thesis Award June 2002
- Une bourse du Reseau Formation-Recherche “K-theorie et groupes algebriques lineaires”, Besançon, France Spring 1997
- Silver Medal at the International Mathematics Olympiad, Moscow July 1992

RESEARCH INTERESTS

- **Algebra and representation theory**; in particular, geometric aspects of representation theory of algebraic and finite groups, representation theory and cohomology of Lie algebras, Hopf algebras, Quantum groups, Triangular geometry.

PUBLICATIONS AND PREPRINTS

- (1) Diamond–graphite phase transition in ultradisperse–diamond clusters, with A. E. Aleksenskii, M. V. Baidakova, A. Ya. Vul’, V. Yu. Davydov *Physics of Solid State* 39, 1007 (1997).
- (2) Infinite dimensional modules for Frobenius kernels, *J. of Pure & Applied Algebra* 173 (2002) no 1, 59–83.
- (3) Support cones for infinitesimal group schemes, *Hopf Algebras*, 203–213, Lecture Notes in Pure & Applied Math., 237, (2004) Dekker, New York.
- (4) Representation–theoretic support spaces for finite group schemes, (with E. Friedlander), *American J. of Math.* 127 (2005), no. 2, 379–420; Erratum, *American J. of Math.* 128 (2006), no. 4, 1067–1068.
- (5) Generic Jordan type of modular representations, in “Cohomology of Finite Groups: Interactions and Applications”, pp. 2375–2434, *Oberwolfach Reports*, v.2, issue 3, (2005).
- (6) Π –supports for modules for finite group schemes over a field, (with E. Friedlander), *Duke Math. J.*, 139 (2007), no. 2, 317–368.
- (7) Generic and maximal Jordan types, (with E. Friedlander and A. Suslin), *Invent. Math.*, 168 (2007), no. 3, 485–522.
- (8) Modules of Constant Jordan Type, (with J. Carlson and E. Friedlander), *J. für die Reine und Ang. Math. (Crelle)* 614 (2008), 191–234.
- (9) Varieties for Modules for Quantum Elementary Abelian Groups, (with S. Witherspoon), *Algebras and Representation theory*, 12 (2009), issue 6, 567–595.
- (10) A note on \mathcal{K}_0 of the exact category of modules of constant Jordan type for sl_2 , preprint.
- (11) Cohomology of finite dimensional pointed Hopf algebras, (with M. Mastnak, P. Schauenburg, and S. Witherspoon), *Proceedings of the LMS*, 100 (2010), part 2, 377–404.
- (12) Constructions for infinitesimal group schemes, (with E. Friedlander), *Trans. Amer. Math. Soc.* 363 (2011), no. 11, 6007–6061.
- (13) Generalized support varieties for finite group schemes, (with E. Friedlander), *Doc. Math.* (2010), Extra volume: Andrei A. Suslin sixtieth birthday, 197222.
- (14) Realization theorem for modules of constant Jordan type and vector bundles, (with D. J. Benson), to appear in Transactions of the AMS.
- (15) Invariants in modular representation theory, “Cohomology of Finite Groups: Interactions and Applications”, *Oberwolfach Reports*, (2010).
- (16) Representations of elementary abelian p-groups and bundles on Grassmannians, (with J. Carlson and E. Friedlander), to appear in “Advances in Math.”

INVITED LECTURES (conferences/workshops)

- AMS Sectional meeting, session “Noncommutative algebra and geometry”, Salt Lake City, Utah, October 22-23, 2011
- “Arithmétique, Algèbre et Applications” (Conférence en l’honneur du 60ième anniversaire de Eva Bayer), EPFL, Lausanne, June 2011
- Workshop “Triangulated categories and applications”; Banff, Canada, June 12-17, 2011
- “K-Theory and Motives” (On the occasion of the 60th birthday of Andrei Suslin), UCLA, March 2011
- Oberwolfach Workshop: “Cohomology of Finite Groups: Interactions and Applications”, July 2010
- UGA VIGRE summer school: “Homological methods in Representation theory”, lecture series, May 2010
- AMS Sectional Meeting, session “Interactions Between Algebraic Geometry and Noncommutative Algebra”, Riverside, CA, November 2009
- “Homotopy theory and applications”, University of Nebraska-Lincoln, April 2009
- AMS Sectional Meeting, session “Combinatorial Representation theory”, Vancouver, BC, October 2008
- MSRI “Evans lecture”, UC Berkeley, April 2008
- MSRI Workshop “Homological methods in Representation Theory”, Berkeley, CA, March 2008
- MSRI Workshop “Connections for Women, Introduction to Spring 2008 Programs”, Berkeley, CA, January 2008
- Pacific Institute for the Mathematical Sciences (PIMS) Algebra Summer School, Edmonton, Canada, July–August 2007
- Conference on “Representations, Cohomology and Support Spaces”, Bielefeld, Germany, April 2007
- AMS Sectional Meeting, session “Representations theory and Galois cohomology in Number Theory”, Davidson, North Carolina, March 2007
- AMS Sectional Meeting, session “Representations of Algebraic Groups”, Durham, New Hampshire, April 2006
- AMS Sectional Meeting, session “Representations of Groups and Algebras”, Eugene, Oregon, November 2005
- Oberwolfach Workshop “Cohomology of Finite Groups: Interactions and Applications”, Oberwolfach, Germany, September 2005
- Joint AMS, DMV and OMG meeting, special session on “Representations and Cohomology of Groups and Algebras”, Mainz, Germany, June 2005
- Conference on “Algebraic Groups and Finite Reductive Groups”, EPFL, Lausanne, Switzerland, June 2005
- AMS National Meeting, session “Modular Representation Theory of Algebraic and Finite groups”, Atlanta, January 2005
- Cascade topology seminar, Eugene, Oregon, November 2003
- AMS Sectional Meeting, session “Galois Module Theory and Hopf Algebras”, Courant Institute, New York, April 2003
- International Hopf Algebra conference, DePaul University, Chicago, February 2002
- Colloque des Jeune Chercheres de Theory Nombres, Grenoble, May 1997

SEMINARS AND COLLOQUIA

- University of Washington, Algebra and Algebraic Geometry seminar, February 2011
- University of California, Santa Barbara, Colloquium, January 2011
- University of Southern California, Algebra seminar, September 2010
- Christian-Albrechts University of Kiel, Colloquium, July 2010
- University of Washington, Current topics seminar, January 2010
- University of Copenhagen, Algebra seminar, May 2008
- UC Santa-Cruz, Colloquium, April 2008
- Postdoctoral Seminar, MSRI, April 2008
- University of Waterloo, Colloquium, February 2008
- University of Western Ontario, Colloquium, February 2008
- Wayne State University, Colloquium, January 2008
- University of Washington, Colloquium, January 2008
- University of Minnesota, Representation Theory Seminar, January 2008
- University of Illinois, Chicago, Colloquium, January 2008
- Vanderbilt University, Colloquium, January 2008
- College of William and Mary, Colloquium, January 2008
- University of Illinois, Urbana–Champaign, Colloquium, January 2008
- University of California, Los Angeles, Colloquium, January 2008
- University of Texas, Austin, Algebra and Number Theory seminar, December 2007
- Texas A&M, Colloquium, December 2007
- University of California, Irvine, Colloquium, December 2007
- University of Wisconsin, Madison, Colloquium, November 2007
- University of Wisconsin, Madison, Representation theory seminar, November 2007
- University of Southern California, Algebra seminar, September 2007
- University of Paderborn, Representation theory seminar, May 2007
- University of South Alabama, Colloquium, March 2007
- University of South Alabama, Algebra seminar, March 2007
- University of Washington, Current Topics Seminar, February 2006
- University of British Columbia, Algebra Seminar, February 2006
- University of Washington, Algebra Seminar, November 2005
- UCLA, Algebra Seminar, November 2005
- Kansas State University, Colloquium, January 2005
- University of Washington, Topology Seminar, November 2004
- Texas A&M, Algebra and combinatorics seminar, October 2004
- Oregon State University, Colloquium, January 2004
- University of Oregon, Algebra seminar, December 2003
- Rutgers University, Lie Groups seminar, April 2003
- Princeton University, Cohomology of Groups seminar, April 2003
- University of Oregon, Colloquium, January 2003
- Institute for Advanced Study, Members seminar, December 2002
- University of Georgia, Athens, Group Cohomology seminar, December 2002
- University of Massachusetts, Amherst, Representation Theory seminar, November 2002
- Rutgers University, Algebra seminar, November 2002
- University of Georgia, Athens, Group Representation & Cohomology, November 2001
- Northwestern University, Algebra seminar, October 2001
- University of Heidelberg, Joint Algebra and Topology seminar, July 2001

INVITED PARTICIPANT

- Workshop “Hochschild Cohomology of Algebras: Structure and Applications”; Banff, Canada, September 2007
- Workshop “Cohomology and representation theory for finite groups of Lie type: computational methods”; American Institute of Mathematics (AIM), Palo Alto, CA, June 2007
- Workshop “Algebraic Groups, Quadratic Forms and Related Topics”; Banff, Canada, September 2006
- Workshop “Triangulated Categories”; Leeds, UK, August 2006
- Joint AMS–SIAM Research Conference “Representations of Algebraic Groups, Quantum Groups and Lie Algebras”; Snowbird, Utah, July 2004
- AMS Summer school “Groups, Representations and Cohomology; Mount Holyoke College”, June 2002

CONFERENCES, SEMINARS, AND SPECIAL SESSIONS ORGANIZED/CO-ORGANIZED

- **Summer school and workshop “Cohomology and Support in Representation Theory and related topics”**, at the University of Washington, (with C. Bendel, H. Krause, and D. Nakano), July 27- August 5, 2012.
- **Graduate student seminar “Representations of Algebras”**, (with S. P. Smith), University of Washington, 2010-2011
- **Special session “Algebraic and categorical methods in Representation theory” at the AMS National meeting**, (with J. Brundan and E. Friedlander), San Francisco, January 2010
- **Algebra seminar**, University of Washington, ongoing
- **Special session “Representations and cohomology” at the AMS National meeting**, (with J. Carlson and D. Nakano), New Orleans, January 2007
- **Graduate student seminar “Quillen’s work on Group Cohomology”**, (with S. Mitchell), University of Washington, 2006
- **Conference “Algebraic cycles, K–theory and Modular representation theory”**, supported by grants from the NSA, NSF and the Clay Institute, (with C. Bendel, C. Heasemeyer, and R. Joshua), Evanston, September 2004

OTHER PROFESSIONAL AND OUTREACH ACTIVITIES

- **Guest editor** of a special volume of *J. of Pure & Applied Algebra* 206 (2006), no. 1–2
- **Referee** for *Advances in Mathematics*, *Algebras and Representation theory*, *Comm. in Algebra*, *Inventiones*, *Journal of Algebra*, *Journal of the London Mathematical Society*, *Journal of Pure & Applied Algebra*, *Math. Zeitschrift*, *Transactions of the AMS*, *Transformation Groups*.
- **Reviewer** for the NSA, **Panelist** for the NSF
- **Presenter at the “Math Day”**, annual outreach activity for Washington State high school students; University of Washington, March 2007, 2009, 2010
- **Lecturer at the Summer Institute for Mathematics at the University of Washington**, annual math summer program for advanced high school students: two week long lecture series July 2007, 2009, 2011, invited lectures July 2006, 2008, 2010
- **Coordinator of the “Math Challenge” program** at Montlake Elementary School for grades 3–5, Seattle, WA, supported by the NSF, 2005–2012
- **Coordinator of the “Math Challenge” program** at Washington Middle School for grades 6–7, Seattle, WA, supported by the NSF, 2009–2010
- **Putnam** prep sessions (with I. Dumitriu), 2008, 2009, 2010, 2011 (Autumn)
- **Co-organizer of the “Math Monthly Hour” program**, a series of popular math lectures for middle school students in Seattle, Spring 2010, 2011
- **Coordinator of the “UW Math Circle”**, a weekly Math circle for 7th and 8th graders in Seattle, 2010–2012.