

CURRICULUM VITAE
Jennifer Paulhus

Current Address:

Department of Mathematics
Kansas State University
138 Cardwell Hall
Manhattan, KS 66506
email: paulhus@math.ksu.edu
webpage: <http://www.math.ksu.edu/~paulhus>

Citizenship: United States

Interests: algebraic number theory, arithmetic geometry, elliptic and hyperelliptic curves, function fields, representation theory, exponential sums, parity of k th powers mod p

Academic Degrees:

Ph.D. in Mathematics

University of Illinois at Urbana-Champaign (UIUC), May 2007 Advisor: Iwan Duursma

B.A. in Mathematics with honors, Computer Science concentration, magna cum laude

College of the Holy Cross, May 1999

Employment: *Assistant Professor-Term Appointment (postdoc)*, Kansas State University, August 2007-Present.

Other Employment: From the summer of 2000 through the summer of 2001, I was a caseworker at a men's homeless shelter through the Americorps/CHART program.

Publications:

J. Bourgain, T. Cochrane, J. Paulhus, and C. Pinner. *Decimations of l -sequences and permutations of even residues mod p* . SIAM Journal on Discrete Mathematics, 232 (2): 842-857, 2009.

J. Paulhus. *Decomposing Jacobians of curves with extra automorphisms*. Acta Arith., 132 (3): 231-244, 2008.

J. Paulhus. *Elliptic factors in Jacobians of low genus curves*. Ph.D. thesis, University of Illinois at Urbana-Champaign, 2007.

C. Girod, M. Lepinski, J. Mileti, and J. Paulhus. *Cwatsset isomorphism and its consequences*. Rose-Hulman Mathematical Sciences Technical Report Series, vol. 1, 2000.

Submitted Papers and Preprints:

L. Berger, J.-L. Hoelscher, Y. Lee, J. Paulhus and R. Scheidler. *The ℓ -rank structure of a global function field*. Submitted.

A. Bennett, R. Manspeaker, R. Natarajan, and J. Paulhus. *Studio College Algebra at Kansas State University*. Submitted.

J. Bourgain, T. Cochrane, J. Paulhus, and C. Pinner. *On the parity of k -th powers mod p : A generalization of a problem of Lehmer*. In Preparation.

J. Paulhus. *Elliptic factors in Jacobians of hyperelliptic curves with certain automorphism groups*. Preprint.

Preprints and thesis available at <http://www.math.ksu.edu/~paulhus>

Invited Talks:

Joint AMS/MAA Meeting, San Francisco, January 2010
MAA-AMS-MER Invited Paper Session on Mathematics and Education Reform
AMS Fall Eastern Section Meeting, Penn State University, October 2009
Special Session on Automorphisms of Riemann Surfaces and Related Topics
Iowa State University Colloquium, October 2009
University of Calgary Number Theory Seminar, July 2009
University of Alaska-Fairbanks Colloquium, March 2009
North Dakota State University Colloquium, February 2009
Joint AMS/MAA Meeting, Washington, D.C., January 2009
AMS Special Session on Group Actions on Curves
University of Georgia Number Theory Seminar, December 2008
Dartmouth College Colloquium, May 2008
University of Nebraska, Lincoln Colloquium, April 2008
Joint AMS/MAA Meeting, San Diego, January 2008
AMS Special Session on Low Genus Curves and Applications
Number Theory Seminar, Colorado State University, October, 2007
Joint AMS/MAA Meeting, New Orleans, January 2007
AMS Special Session on Arithmetic of Function Fields

Other Conference Talks:

Western Number Theory Conference, Colorado State University, December 2008
Canadian Number Theory Association X Meeting, Waterloo, July 2008
Canadian Number Theory Association IX Meeting, Vancouver, July 2006
West Coast Number Theory Conference, Asilomar, December 2005
Midwest Number Theory Conference for Graduate Students, Univ. of Wisconsin, November 2005
Midwest Number Theory Conference for Graduate Students, UIUC, February 2005

Workshops:

Women in Numbers, Banff International Research Station, November 2008
Rational Points on Curves, Banff International Research Station, February 2007
Arizona Winter School, March 2006
Worked on a group project: “Computing cohomology in algebraic geometry” under the direction of Professor Michael Stillman

Honors and Awards:

UIUC Mathematics Department Mathematics Instructional Award, Spring 2004
Incomplete List of Teachers Recognized as Excellent by Their Students
Fall 2001, Spring 2002, Fall 2003
The Gertrude McBrien Mathematics Prize
Awarded by The College of the Holy Cross Math Department for proficiency in mathematics
Phi Beta Kappa Member

Graduate Fellowships:

VIGRE: Spring 2003

GAANN: Fall 1999-Spring 2000, Summer 2003, Spring 2004

Teaching:

Postdoc: Kansas State University (+ indicates graduate course)

- Introduction to the Theory of Groups⁺, Summer 2008
- Topics in Number Theory: Elliptic Curves⁺, Spring 2008
- Discrete Mathematics, Fall 2008, Fall 2009
- Introduction to Contemporary Mathematics, Fall 2009
- Studio College Algebra, Spring 2008, Fall 2008
- College Algebra, Fall 2007, Spring 2009

Graduate Teaching Assistant: UIUC (* indicates primary instructor)

- Grader: Algebraic Number Theory and Graduate Abstract Algebra II, Spring 2007
- Grader: Homological Algebra and Graduate Abstract Algebra II, Spring 2006
- Grader: Graduate Abstract Algebra I and II, Fall 2005
- Calculus for Business*, Spring 2005, large lecture
- A Mathematical World*, Fall 2004
- College Algebra*, Fall 2002
- Theory of Arithmetic, Fall 2001, Spring 2002, Fall 2003
- Calculus for Business*, Summer 2000
- Introductory Matrix Theory*, Spring 2000
- Calculus I, Fall 1999

Service:

Reviewer: AMS Mathematical Reviews

Co-organizer: AMS Special Session on Arithmetic Geometry, AMS/MAA Meetings, January 2010

Co-organizer: Midwest Number Theory Conference for Graduate Students and Recent PhDs II, UIUC, February 2005

Organizer: Graduate Student Seminar, Algebraic Number Theory, UIUC, Summer 2003

We read parts of Serre's *Local Fields* and Washington's *Introduction to Cyclotomic Fields*

Co-organizer: Seminar for Women in Math, UIUC, Fall 2002-Spring 2003

A seminar series giving women in the department an opportunity to give a math talk in a relaxed environment

Committee: Department of Mathematics Teaching Awards Committee, UIUC, Spring 2005

Committee: Non-academic Staff Award Committee, UIUC, Fall 2002-Spring 2003

Committee: Space Committee, UIUC, Fall 2003-Spring 2004

Membership:

American Mathematical Society

Computer Expertise: Proficient in C++, php, and most computer algebra packages (including *GAP*, *MAGMA*, *PARI/GP*, and *Macaulay2*)