

CURRICULUM VITAE OF AARON LAUVE

Postal Address:

LaCIM
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Citizenship: USA

EDUCATION

Rutgers, The State University of New Jersey *New Brunswick, NJ*

Ph.D. *A quasideterminantal approach to quantized flag varieties*, May 2005

Directed by Vladimir Retakh and Robert L. Wilson

The University of Oklahoma *Norman, OK*

B.S. Mathematics, summa cum laude, May 1999

B.S. Physics, with distinction, May 1999

CURRENT POSITION

Université du Québec à Montréal (UQÀM)

Laboratoire de Combinatoire et d'Informatique Mathématique (LaCIM)

Canada Research Chair Postdoctoral Fellow, 2005–2007

TEACHING EXPERIENCE

University Courses

(Further details available on my “Courses” page at <http://www.lacim.uqam.ca/~lauve>)

Instructor

- Calculus II, McGill University, Fall 2006
- Linear Algebra and its Applications, graduate level, Rutgers University, Summer 2005
- Introduction to Linear Algebra, Rutgers University, Summer 2002

Co-Instructor

- (w/ F. Bergeron, F. Saliola) Algebra and Combinatorics, graduate level, UQAM, Fall 2006

Teaching Assistant (Rutgers University, 2001–2004)

- Calculus I, II, & III for Physical Science Majors, 6 semesters
- Calculus I for Life Science and Business Majors, 1 semester

Undergraduate Supervision

Postdoctoral Supervisor (CRM-ISM Summer Scholarships Program)

- (w/ B. Larose) *Schützenberger’s conjectures on Young tableaux evacuation*, Summer 2006

Graduate Mentor (Rutgers Math. Research Experience for Undergraduates (REU) Program)

- (w/ S. Sahi) *Tabulation of spherical functions using a formula of S. Sahi*, Summer 2003
- (w/ A. Taylor) *Computing maximal minors of “A-matrices” using graphs*, Summer 2001
- (w/ C. Woodward) *Multiplicity-free products and quantum cohomology*, Summer 2000

RESEARCH PAPERS

- F. Bergeron, A. Lauve, *Invariants and coinvariants for the algebra of symmetric functions in noncommuting variables*, in preparation.
- A. Lauve, *On novel ways to invert a matrix*, in preparation.
- A. Lauve, *Quasideterminants and q -commuting minors*, submitted.
- A. Lauve, *Flag varieties for the Yangian $Y(\mathfrak{gl}_n)$* , submitted.
- A. Lauve, E. J. Taft, *A class of left quantum groups modeled after $SL_q(n)$* , J. Pure and Appl. Algebra, accepted.
- A. Lauve, *Quantum- and quasi-Plcker coordinates*, J. Algebra, 296 (2006) no. 2, 440–461.
- D. F. Anderson, A. Frazier, A. Lauve, P. Livingston, *The zero-divisor graph of a commutative ring II*, Ideal Theoretic Methods in Commutative Algebra, 61–72, Lecture Notes in Pure and Appl. Math., 220, 2001.

INVITED TALKS**Expert Audience**

- Commutative and noncommutative invariants of the symmetric group*, AMS Sectional Meeting, November 2006 & CMS Winter Meeting, December 2006.
- On novel ways to invert a matrix*, XVIIIth Meeting on Representation Theory of Algebras, Sherbrooke University, September 2006 & CMS Winter Meeting, December 2006.
- PO-set paths and q -commuting minors*, Séminaire du LaCIM, April 2006.
- Noncommutative flag varieties and Yangians*, AMS Sectional Meeting, November 2005.
- Generalized Grassmannians constructed via quasideterminants*, Joint Meetings, January 2005.
- Quantum and quasi-Plcker coordinates*, AMS Sectional Meeting, October 2004.
- Capture the flag: the quantum flag of Taft & Towber revisited*, Rutgers Algebra Seminar, April 2004 & Rutgers Constructive Noncommutative Algebra Seminar, October 2003.

General Math Audience

- Schur Polynomials*, Graduate Student Pizza Seminar (GPS), September 2004.
- Horned Hermitian Honeybees and their Quasi-Friends*, GPS, October 2003.
- Fun with Polynomials*, GPS, February 2003.
- Down with Determinants?*, GPS, November 2002.
- And at the root of it all Finite Reflection Groups*, GPS, September 2001.
- $\Gamma(R)$: *graph theory meets ring theory*, GPS, October 2000.
- Who was Tableaux, and how young was he?*, GPS, October 1999.

Outreach

- Fun with Polynomials*, Rutgers Undergraduate Seminar, April 2002.
- Zero-divisor graphs*, OU Math Club Student Lecture Series, Univ. of Oklahoma, Fall 1998.
- Torus knots*, OU-MAA Math Meet, Univ. of Oklahoma, Fall 1997.
- Tangling with topology*, Mu Alpha Theta National Convention, August 1996.
- MA Θ is an organization for high school students interested in mathematics.

PROFESSIONAL SERVICE

Co-organizer, CRM Mini-workshop: Alg. Comb. meets Inverse Systems, January 2007

Co-chair, AMS Contributed Papers Session, Joint Meetings, January 2005

Rutgers University

Member, VIGRE Grant Proposal Committee, Spring 2003

Organizer, Graduate Student Seminar, 2000–2002

Organizer, Graduate Student Algebra Group, Summers 2000, 2001

University of Oklahoma

Member, College of Arts and Sciences Student Advisory Committee, 1998–1999

President, Pi Mu Epsilon (PME) Honor Society, 1995–1996

Organizer, PME-MAA Math Awareness Week, 1996–1998

HONORS and AWARDS**Rutgers University**

Louis Bevier Dissertation Fellowship, 2004–2005

DIMACS Graduate Student Award, Summers 2003 & 2004

VIGRE Fellow, 1999–2001

University of Oklahoma

National Science Foundation (NSF) Graduate Fellowship Runner-Up, 1999

Samuel Watson Reaves Scholarship, Most Outstanding Math Senior, 1998

Departmental Scholarships: Math Department, 1993–1998

Departmental Scholarships: Physics Department, 1994–1998

National Merit Scholar

University of Tennessee *Knoxville, TN*

NSF Undergraduate Research Fellowship, REU program

(under D. F. Anderson) *The planarity & connectivity properties of the zero-divisor graphs of finite commutative rings*, Summer 1998

COMPUTER EXPERTISE

In my research, I frequently use computer algebra systems (e.g. Maple, Mathematica) for finding and testing hypotheses, and I occasionally use more high-powered languages. Concerning teaching, I occasionally use technology in the classroom and always use it outside the classroom in the form of substantial homepages for my courses.

MEMBERSHIP

American Mathematical Society, 2000 to present

Mathematical Association of America, 2006