Christopher Ryan Vinroot

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Employment and Education

- **College of William & Mary**, Williamsburg, Virginia.
  Assistant Professor of Mathematics, August 2008 – .
- **University of Arizona**, Tucson, Arizona.
  Hanno Rund Visiting Assistant Professor of Mathematics, August 2005 – May 2008.
- **Tata Institute of Fundamental Research**, Mumbai, India.
  Visiting Fellow, School of Mathematics, September 2004 – June 2005.
- **Stanford University**, Stanford, California.
  Ph.D. in Mathematics, 2004.
  Dissertation titled "Twisted Frobenius-Schur indicators of symplectic groups over a finite field," written under the direction of thesis advisor Daniel Bump.
  M.S. in Mathematics, 2000.
- **North Carolina State University**, Raleigh, North Carolina.
  B.S. with honors in Mathematics, 1998.

Research Interests

General Area: Representation Theory

Specific Areas:

- Finite groups of Lie type
- Representations of p-adic groups, automorphic representations
- Symmetric functions, algebraic combinatorics

Teaching Experience

- **University of Arizona** (August 2005 – present), Instructor for two semesters of Calculus, one semester of Linear Algebra, two semesters of Abstract Algebra, and a graduate course on Representation Theory.

- **Stanford University** (January 2000 – June 2004), Teaching assistant in sections for the three different quarters of the first-year calculus sequence over three years. Taught sections for two full first-year calculus sequences for Accelerated Calculus for Engineers, a program specialized for engineering majors.
- **Stanford High School Enrichment Project** (Spring 2000), Volunteer teach for a co-taught short course in various mathematical topics for area high school students.

Honors and Awards

- **Centennial TA Award** (2003), Awarded from Stanford for outstanding teaching.
- **NSF Graduate Fellowship** (1998–2001)
- **Phi Beta Kappa** (1998), North Carolina State University.
- **Barry Goldwater Scholarship** (1997)

Recent Invited Talks

- AMS Sectional Meeting, Louisiana State University, Baton Rouge, Special Session on Geometric and Combinatorial Representation Theory, March 2008.
- AMS Sectional Meeting, Middle Tennessee State University, Murfreesboro, Special Session on Lie and Representation Theory, November 2007
- Stanford University, Representation Theory Seminar, May 2007
- North Carolina State University, Algebra Seminar, March 2007
- California Institute of Technology, Number Theory Seminar, November 2006
- Formal Power Series and Algebraic Combinatorics Conference, San Diego, June 2006
- Stanford University, Representation Theory Seminar, March 2006
- Indian Statistical Institute (Bangalore, India), Mathematics Seminar, May 2005
- Institute of Mathematical Sciences (Chennai, India), Mathematics Colloquium, April 2005
- Harish-Chandra Research Institute (Allahabad, India), Mathematics Seminar, March 2005
- University of Oregon, Groups and Representations Conference for the 60th birthday of Gary Seitz, March 2004
- University of Wisconsin at Madison, Lie Theory Seminar, December 2003
- University of California at Santa Cruz, Algebra Seminar, October 2003

Publications

1. **A factorization in** $GSp(V)$, *Linear and Multilinear Algebra* **52** (2004), no. 6, 385–403.
2. **Twisted Frobenius-Schur indicators of finite symplectic groups**, *J. Algebra* **293** (2005), no. 1, 279–311.
3. **Involutions acting on representations**, *J. Algebra* **297** (2006), no. 1, 50–61.
4. **A note on orthogonal similitude groups**, *Linear and Multilinear Algebra* **54** (2006), no. 6, 391–396.
5. **On the characteristic map of finite unitary groups**, with N. Thiem, *Adv. Math.* **210** (2007), no. 2, 707–732.
6. **Involution models of finite Coxeter groups**, *J. Group Theory* **11** (2008), no. 3, 333–340.
7. **Extending real-valued characters of the finite general linear and unitary groups on elements related to regular unipotents**, with R. Gow, *J. Group Theory* **11** (2008), no. 3, 299–331.
8. **Values of character sums for finite unitary groups**, with N. Thiem, *J. Algebra* **320** (2008), no. 3, 1150–1173.
9. **Gelfand-Graev characters of the finite unitary groups**, with N. Thiem, submitted for publication.
10. **Symplectic models of** p**-adic unitary groups**, with E. Wambach, in preparation.

Visitations and Conferences

- **Topics in Combinatorial Representation Theory, MSRI** (March, 2008) — Five day workshop at the Mathematical Sciences Research Institute in Berkeley, California.
- **Visitor, University College Dublin** (July, 2006) — Two week visit to collaborate with Roderick Gow in Dublin, Ireland.
- **Flavors of Groups Conference** (November, 2005) — Five day program at the Banff International Research Station, Canada.
- **Visitor, Harish-Chandra Research Institute** (March, 2005) — One week visit in Allahabad, India.
- **Park City Mathematics Institute** (Summer, 2002) — Program on automorphic forms.

Other Activities

- Contributor to *Mathematical Reviews*.
- Lecturer, Integration Workshop, University of Arizona, August 2007, a program for incoming graduate students.
- Co-organizer, Group Theory Seminar, University of Arizona.
- Co-organizer, Undergraduate Problem Solving Seminar, University of Arizona.
- Co-organizer, Southwestern Group Theory Day, a one-day conference held at University of Arizona on October 27, 2007.
- Research advisor to undergraduate student Julio Brau, University of Arizona.
- Advisor of honors thesis to undergraduate Matthew Hall, University of Arizona.
- Oral exam committee member for graduate student Selin Kalaycioglu, University of Arizona.