

Curriculum Vitae

BEN WEBSTER

Office Address: Department of Mathematics Email: bwebste@math.berkeley.edu
University of California, Berkeley Website: <http://math.berkeley.edu/~bwebste>
Berkeley, CA 94720 Phone: (510) 229-0051
Date of Birth: December 6, 1981 Citizenship: USA

Education:

- 2002 – 2007 **Ph.D. in Mathematics**, University of California, Berkeley (expected).
Supervisor: N. Reshetikhin.
Thesis: “Algebraic Poisson Geometry in Representation Theory and Topology.”
- 1998 – 2002 **B.A. in Mathematics**, Simon’s Rock College, *summa cum laude*
Supervisor: W. Dunbar

As visitor

- 2006 Fall Center for the Topology and Quantization of Moduli Spaces, (Århus, Denmark).
2001 Spring Budapest Semesters in Mathematics, (Budapest, Hungary).

Scientific/Academic Honors and Grants:

- 2003 – 2007 NSF Graduate Research Fellowship
2005 June Received NSF-Berkeley travel grant to attend the conference “Representation Theory, Geometry and Automorphic Forms” in Tel Aviv, Israel.

Research Interests:

Knot theory and representation theory via algebraic and Poisson geometry.

Publications and Preprints:

available at <http://math.berkeley.edu/~bwebste>

- in prep. 1. *Poisson-Lie groups and decorated graph connections* (with Nicolai Reshetikhin and Milen Yakimov).
2. *Cell-complexes on finite cluster \mathcal{X} -varieties*.
- submitted 3. *A Deodhar type stratification of the double flag variety* (with Milen Yakimov). arXiv:math.SG/0607374.
articles
4. *Khovanov-Rozansky homology via canopoli*. arXiv:math.GT/0610650.
5. *Small linearly equivalent G -sets and a construction of Beaulieu*. arXiv:math.GR/0610205.
6. *Cramped subgroups and generalized Harish-Chandra modules*. arXiv:math.RT/0609846.
- 2006 7. *Stabilization phenomena in Kac-Moody algebras and quiver varieties*. arXiv:math.RT/0505619.
To appear in International Math Research Notices.
8. *Arithmetic and topology of hypertoric varieties* (with Nicholas Proudfoot). arXiv:math.AG/0411350.
To appear in the Journal of Algebraic Geometry.

Selected Lectures:

- 2006 Dec. **Sandbjerg, Denmark** (CTQM Retreat): *Computation in Khovanov-Rozansky homology II*.
Nov. **Århus, Denmark** (Topology Seminar): *Computation in Khovanov-Rozansky homology*.
July **Reisenburg, Germany** (IRTG Summer School): *Stratifications à la Deodhar*.
Apr. **Berkeley** (Subfactor seminar): *Khovanov homology and slice genus*.
Feb. **Columbia** (Gauge Theory seminar): *Computation in Khovanov-Rozansky homology*.
Jan. **Berkeley** (Representation Theory, Geometry and Combinatorics seminar):
Computation in Khovanov-Rozansky homology.

- 2005 Dec. **GWU** (Knots in Washington):
Khovanov-Rozansky homology and a graphical calculus for tensor products.
- Oct. **Oregon** (Lie Groups, Lie Algebras and their Representations):
Stabilization in Kac-Moody algebras and quiver varieties.
- May **Berkeley** (Workshop on Representation Theory and Geometry):
Stabilization in Kac-Moody algebras and quiver varieties.
- Apr. **Santa Barbara** (AMS Meeting): *Kazhdan-Lusztig polynomials for hypertoric varieties.*
- Apr. **Northwestern** (Grad Student Topology Conf.): *An introduction to intersection cohomology.*
- 2004 Oct. **Berkeley** (RTG&C seminar): *Intersection cohomology of hypertoric varieties.*
- Mar. **Berkeley** (RTG&C seminar): *Kac-Moody algebras and quiver varieties.*
- 2003 Mar. **Baton Rouge** (AMS meeting):
Beaulieu's construction/Mackey functors and Sunada's theorem.

Professional Activities:

- 2005 May Organizer (with N. Reshetikhin) for workshop "Representation Theory and Geometry" in Berkeley.
- 2004 June Participant in "MRI Spring School on Lie Groups in Analysis, Geometry and Mechanics" in Utrecht, The Netherlands.
- 2003 Co-organizer of weekly graduate student seminar "Many Cheerful Facts" at Berkeley.
- 2001 Summer Participant in "Research Experiences for Undergraduates" at Louisiana State University (supervisor: Robert Perlis)

Teaching Activities:

- 2006 Fall Tutor for graduate students as complement to course "Quantization of Moduli Spaces."
- 2005 Fall Teaching assistant for multivariable calculus with Prof. Alan Weinstein.
- 2002 Fall Teaching assistant for calculus (second of two semesters) with Prof. Hung-Hsi Wu.
- 2002 Sep. Attended Berkeley Mathematics Department training course for teaching assistants.
- 1999–2002 Tutor for Simon's Rock Tutoring and Writing Center.

Selected Classes Attended:

| | |
|--|--|
| <i>Quantization of Moduli Spaces</i> (J.E. Andersen, N. Reshetikhin, V. Fock) | <i>Conformal Field Theory</i> (N. Reshetikhin) |
| <i>Quantum Groups and Geometry</i> (P. Littelmann) | <i>Algebraic Combinatorics</i> (M. Haiman) |
| <i>Elliptic Cohomology</i> (P. Teichner) | <i>Quantum Groups</i> (M. Haiman) |
| | <i>Deformation Theory</i> (R. Hartshorne) |