

Biographical Sketch

BEN WEBSTER

Office Address: Department of Mathematics
Northeastern University
Boston, MA
Citizenship: USA

Email: b.webster@neu.edu
Website: <http://www.math.neu.edu/~bwebster>
Phone: 617-852-1387

Professional Preparation:

Simon's Rock College	Mathematics	B.A.	1998-2002
University of California, Berkeley	Mathematics	Ph.D.	2002-2007
Institute for Advanced Study	Mathematics	Postdoc.	2007-2008
Massachusetts Institute of Technology	Mathematics	Postdoc.	2008-2010

Visited as a Student:

Budapest Semesters in Math, Budapest, Hungary Spring 2001
Center for Topology and Quantization of Moduli Spaces, Aarhus, Denmark Fall 2006

Appointments:

2011 – **Assistant Professor**, Northeastern University.
2010 – 2011 **Assistant Professor**, University of Oregon.
2008 – 2010 **C.L.E. Moore Instructor** and **NSF Postdoctoral Fellow**, M.I.T.
2007 – 2008 **Member** and **NSF Postdoctoral Fellow**, Institute for Advanced Study.

Publications:

Most relevant:

1. T. Braden, A. Licata, N. Proudfoot and B. Webster, *Hypertoric category \mathcal{O}* . arXiv:1010.2001. submitted to Duke Mathematics Journal
2. B. Webster, *Knot invariants and higher representation theory II: the categorification of quantum knot invariants*. arXiv:1005.4559. submitted to Annals of Mathematics.
3. B. Webster, *Singular blocks of parabolic category \mathcal{O} and finite W -algebras*. to appear in Journal of Pure and Applied Algebra. arXiv:0909.1860
4. B. Webster, *Knot invariants and higher representation theory I: diagrammatic and geometric categorification of tensor products*. arXiv:1001.2020. submitted to Annals of Mathematics.
5. T. Braden, A. Licata, N. Proudfoot and B. Webster, *Gale duality and Koszul duality* Advances in Mathematics, **225** (2010) 2002–2049. arXiv:0806.3256

Other selected publications:

1. B. Webster and G. Williamson, *A geometric construction of colored HOMFLYPT homology*. arXiv:0905.0486. submitted to Geometry and Topology.
2. T. Braden, A. Licata, C. Phan, N. Proudfoot and B. Webster, *Localization algebras and deformations of Koszul algebras*. to appear in Selecta Mathematica. arXiv:0905.1335
3. C. Stroppel and B. Webster, *2-block Springer fibers: convolution algebras and coherent sheaves*. to appear in Commentarii Mathematici Helvetici. arXiv:0802.1943

4. B. Webster and G. Williamson *A geometric model for the Hochschild homology of Soergel bimodules*. *Geometry and Topology*, **12** (2008) 1243–1263. arXiv:0707.2003.
5. N. Proudfoot and B. Webster, *Intersection cohomology of hypertoric varieties*. *Journal of Algebraic Geometry* **16** (2007), 39–63. arXiv:math.AG/0411350.

Synergistic activities:

1. Gave expository sequences of lectures for graduate students at Introductory Workshop of MSRI program on Homology of Knots and Links (Jan. 2010) and at Oporto Meeting in mathematics and physics. Also, frequent invited speaker at national and international conferences.
2. Gave expository lectures at more basic level in Boston Math Circle (intended for high school students), Math Club at Simon’s Rock College (intended for undergrads), “Basic Notions” seminar at U. of Oregon (intended for beginning graduate students) and organized similar lecture series “Many Cheerful Facts” as graduate student at Berkeley.
3. Moderator of mathematics forum mathoverflow.net; also cofounded popular mathematics blog “Secret Blogging Seminar.”
4. Mentor in AWM’s mentor program for both an undergraduate and graduate student.
5. Regularly referee scholarly papers and write MathSciNet reviews.

Collaborators and advisors:

- A. Licata, Stanford University
- T. Braden, University of Massachusetts
- C. Stroppel, Universität Bonn
- J. Kamnitzer, University of Toronto
- G. Williamson, University of Oxford
- Y. Kremnitzer, University of Oxford
- N. Proudfoot, University of Oregon
- M. Yakimov, University of Louisiana
- R. Bezrukavnikov, MIT (postdoctoral sponsor)
- N. Reshetikhin, University of California, Berkeley (Ph. D advisor)