

Jacob A. Rasmussen

CURRICULUM VITAE

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PERSONAL: Born April, 1976, in Providence, RI, USA.
U.S. Citizen.

EDUCATION:

Harvard University: Ph.D. in Mathematics, 2003.
Advisor: Peter Kronheimer.
Thesis title: *Floer homology and knot complements*.
Princeton University: A.B. in Mathematics, *summa cum laude*, 1998.
Class of 1998 Latin Salutatorian.

EMPLOYMENT:

2010-11 Visiting Professor, Simons Center for Geometry and Physics.
2007-8 Visiting Associate Professor, Princeton University.
2007- Reader in Geometry, University of Cambridge.
2005-7 Assistant Professor, Princeton University.
2003-5 Veblen Research Instructor, Princeton University/IAS.

RESEARCH INTERESTS:

Knot theory and low dimensional topology. Gauge theory and Heegaard Floer homology. Khovanov homology.

FELLOWSHIPS AND GRANTS:

Sloan Fellowship, 2007-2008.
NSF Grant DMS-0603940, 2006-2009.
NSF Postdoctoral Fellowship, 2003-2006.
DOD Graduate Fellowship, 1998-2001.
Barry M. Goldwater Scholar, 1996-8.

PUBLICATIONS AND PREPRINTS:

with E. Gorsky, A. Oblomkov, and V. Shende, *Torus Knots and the rational DAHA*, to appear in Duke Math. Journal.
with E. Gorsky and A. Oblomkov, *On stable Khovanov homology of torus knots*, *Experimental Mathematics* **22** (2013), 265-281.
with A. Oblomkov and V. Shende, *The Hilbert scheme of a plane curve singularity and the HOMFLY homology of its link*, preprint, [arXiv:1201.2115](https://arxiv.org/abs/1201.2115).

- with A. Juhász and T. Kalmán, *Sutured Floer homology and hypergraphs*,
Math. Res. Lett. **19** (2012), no. 6, 1309-1328.
- with S. Friedl and A. Juhász, *The decategorification of sutured Floer homology*,
Journal of Topology **4** (2011), no. 2, 431-478.
- with P. Ozsváth and Z. Szabó, *Odd Khovanov homology*, Alg. Geom. Top. **13**
(2013) no. 3, 1465-1488.
- Lens space surgeries and L-space homology spheres*, preprint, arXiv:0710.2531.
- Some differentials on Khovanov-Rozansky homology*, preprint,
arXiv:math/0607544.
- Khovanov-Rozansky homology of two-bridge knots and links*, Duke Math.
Journal, **136** (2007), no. 3, 551-583.
- with N. Dunfield and S. Gukov, *The superpolynomial for knot homologies*,
Experimental Mathematics **15** (2006), 129-161.
- Knot homologies*, in *Geometry and Topology of Manifolds* (Boden et al. eds.),
Fields Institute Communications **47** (2005), 261-280. Providence, RI: AMS.
- Khovanov homology and the slice genus*, Invent. Math. **182** (2010) no. 2,
419-447.
- Lens space surgeries and a conjecture of Goda and Teragaito*, Geom. Top.
8 (2004), 1013-1031.
- Floer homology of surgeries on two-bridge knots*, Alg. Geom. Top.
2(2002), 757-89.