

## PUBLICATIONS

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- Published*
- *A diagrammatic Temperley-Lieb categorification*, International Journal of Mathematics and Mathematical Sciences, Article ID 530808 (2010). <http://arxiv.org/abs/1003.3416>.
  - *Diagrammatics for Soergel categories*, (with Mikhail Khovanov), International Journal of Mathematics and Mathematical Sciences, Article ID 978635 (2010). <http://arxiv.org/abs/0902.4700>.
  - *Rouquier complexes are functorial over braid cobordisms*, (with Daniel Krasner), Homology, Homotopy and Applications, 12 (2010), No. 2, 109–146. <http://arxiv.org/abs/0906.4761>.
  - *Minimal permutation representations of nilpotent groups*, (with Lior Silberman and Ramin Takloo-Bighash), Journal of Experimental Mathematics, 19 (2010), No. 1, 121–128. <http://arxiv.org/abs/0705.4122>.
- Accepted*
- *The Hodge theory of Soergel bimodules*, (with Geordie Williamson), to appear in *Annals of Mathematics*, <http://arxiv.org/abs/1212.0791>.
- Submitted*
- *An approach to categorification of some small quantum groups II*, (with You Qi), <http://arxiv.org/abs/1302.5478>.
- Preprints*
- *Soergel calculus*, (with Geordie Williamson), <http://arxiv.org/abs/1309.0865>.
  - *The two-color Soergel calculus*, <http://arxiv.org/abs/1308.6611>.
  - *On cubes of Frobenius extensions*, (with Geordie Williamson), <http://arxiv.org/abs/1308.5994>.
  - *A diagrammatic category for generalized Bott-Samelson bimodules and a diagrammatic categorification of induced trivial modules for Hecke algebras*, <http://arxiv.org/abs/1009.2120>.
- In prep.*
- *Diagrammatics for Coxeter groups and their braid groups*, (with Geordie Williamson).
  - *Kazhdan-Lusztig conjectures and shadows of Hodge theory*, (with Geordie Williamson), for the Hirzebruch Arbeitstagung.
  - *Folding Soergel bimodules*, (with Geordie Williamson).
  - *Categorifying the Lusztig-Vogan representation*, (with Geordie Williamson).
  - *Soergel bimodules for universal Coxeter groups*, (with Nicolas Libedinsky).
  - *The quantum algebraic Satake equivalence I :  $\mathfrak{sl}_2$  and  $\mathfrak{sl}_3$* .
  - *Special Koszul complexes*.

## THESES AND ESSAYS

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- *Soergel bimodules for dihedral groups*,  
Doctoral thesis, Columbia University, 2011.
- *Minimally faithful group actions and p-groups*,  
Undergraduate thesis, Princeton University, 2005.