Sabin Cautis   *Curriculum Vitae*

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Education
- **Harvard University**, Ph.D., 2001–2006,
  Advisor: Joe Harris.
- **University of Waterloo**, BMath. (Hons), mathematics, 1997–2001.

Positions
- **University of British Columbia** Professor (CRC II), 2019 – current
- **University of British Columbia** Assoc. Professor (CRC II), 2015 – 2019
- **University of British Columbia** Assist. Professor, 2013 – 2015
- **University of Southern California** Assist. Professor, 2012 – 2013
- **Columbia University** Ritt Assist. Professor, 2009 – 2012
- **Math. Sciences Research Inst.** Postdoctoral Fellowship, Spring 2009
- **Rice University** G.C. Evans Instructor, 2006 – 2009.
- **Mittag-Leffler Institute** Visiting Scholar, Spring 2007.

Areas of Interest
- algebraic geometry, geometric representation theory, knot invariants, categorification, combinatorics.

Grants
- NSERC Discover grant, ongoing 2014-current
- NSERC accelerator grant, 2014-2017
- NSF grant DMS-1101439, 2011-2014
- NSF grants DMS-0801939 and DMS-0964439, 2008-2011

Awards
- Coxeter-James Prize, 2017
- André-Aisenstadt Prize, 2014
- Alfred P. Sloan Fellowship, 2011-2013
- Harvard Putnam Fellowship, 2003-2006
- Putnam Fellow and member of winning Putnam team, 1999
- Ranked top 10 in the Putnam Competition, 1997-1999
- Canadian Mathematics Olympiad 1st place, 1997

Publications

35. H. Williams.
    Cluster theory of the coherent Satake category,
    J. Amer. Math. Soc., (2019), no. 32, 709–778. arXiv:1801.08111

34. A. Lauda, J. Sussan.
    Curved Rickard complexes and link homologies,
    J. Reine Angew. Math. (accepted). arxiv.org/abs/1901.08195

33. *Remarks on coloured triply graded link invariants,*
    Algebraic & Geometric Topology 17, (2017), no. 6, 3811–3836. arXiv:1611.09924

32. C. Koppensteiner.
    Exotic t-structures and actions of quantum affine algebras,

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31. J. Kamnitzer.
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Selecta Math. 24, (2018), no. 2, 1593–1631. arXiv:1611.02210

30. A. Lauda, A. Licata, P. Samuelson, J. Sussan.
The Elliptic Hall algebra and the deformed Khovanov Heisenberg category,
Selecta Math. (2018), no. 24, 4041–4103. arXiv:1609.03506

29. C. Dodd, J. Kamnitzer.
Associated graded of Hodge modules and categorical sl_2 actions,
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28. J. Kamnitzer.
Quantum K-theoretic geometric Satake: the SL_n case,
Compositio Math. 154 (2018), no. 2, 275–327. arXiv:1509.00112

27. A. Lauda, A. Licata, J. Sussan.
W-algebras from Heisenberg categories,
J. Inst. Math. Jussieu (2016), 1–37. arXiv:1501.00589

26. J. Kamnitzer.
Knot homology via derived categories of coherent sheaves IV, coloured links,
Quantum Topology 8, (2017), no. 2, 381–411. arXiv:1410.7156

25. *Rigidity in Higher Representation Theory,*
arXiv:1409.0827

24. J. Sussan.
On a Categorical Boson-Fermion Correspondence,
C.M.P, (2015), no. 336, 649–669. arXiv:1403.6019

23. *The Solvable Monodromy Extension Property and Varieties of Log General Type,*
A celebration of algebraic geometry, Clay Math. Proc. 18, (2013), 119–129. arXiv:1301.5972

22. J. Kamnitzer, S. Morrison.
Webs and Quantum Skew Howe Duality,
Math. Annalen, (2014), no. 360, 351–390. arXiv:1210.6437

21. A. Licata, J. Sussan.
Braid Group Actions via Categorified Heisenberg Complexes,
Compositio Math. 150 (2014), 105–142. arXiv:1207.5245

20. *Clasp Technology to Knot Homology via the Affine Grassmannian,*
Math. Annalen, (2015), no. 363, 1053–1115. arXiv:1207.2074

19. A. Craw, T. Logvinenko.
Derived Reid's Recipe for Abelian Subgroups of $SL_3(C)$,
J. Reine Angew. Math. 727 (2017), 1–48. arXiv:1205.3110

18. A. Licata.
    Vertex Operators and 2-Representations of Quantum Affine Algebras,
    arXiv:1112.6189

17. A. Licata.
    Loop Realizations of Quantum Affine Algebras,
    J. Math. Phys. 53 (2012), no. 12, 18pp. arXiv:1112.6188

16. *Flops and About: a Guide,*
    Derived Categories in Algebraic Geometry, EMS Congress Reports
    (2011), no. 8, 61–101. arXiv:1111.0688

15. A. Lauda.
    Implicit Structure in 2-representations of Quantum Groups,
    Selecta Math. (2015), no. 21, 201–244. arXiv:1111.1431

14. J. Kamnitzer, A. Licata.
    Coherent Sheaves on Quiver Varieties and Categorification,
    Math. Annalen 357, (2013), no. 3, 805–854. arXiv:1104.0352

13. A. Licata.
    Heisenberg Categorification and Hilbert Schemes,
    Duke Math Journal 161 (2012), no. 13, 2469–2547. arXiv:1009.5147

12. J. Kamnitzer.
    Braiding via Geometric Lie Algebra Actions,
    Compositio Math. 148 (2012), no. 2, 464–506. arXiv:1001.0619

11. *Equivalences and Stratified Flops,*
    Compositio Math. 148 (2012), no. 1, 185–209. arXiv:0909.0817

10. J. Kamnitzer, A. Licata.
    *Derived Equivalences for Cotangent Bundles of Grassmannians via
    Categorical sl_2 Actions,*
    J. Reine Angew. Math. 675 (2013), 53–99. arXiv:0902.1797

9. J. Kamnitzer, A. Licata.
   Categorical Geometric Skew Howe Duality,
   Inventiones Math. 180 (2010), no. 1, 111–159. arXiv:0902.1795

8. J. Kamnitzer, A. Licata.
   Coherent Sheaves and Categorical sl_2 Actions,
   Duke Math Journal 154 (2010), no. 1, 135–179. arXiv:0902.1796

7. J. Kamnitzer. *Knot Homology Via Derived Categories of Coherent
   Sheaves II, sl(m) Case,*
   Inventiones Math. 174 (2008), no. 1, 165–232. arXiv:0710.3216

6. T. Logvinenko.
   Geometric McKay Correspondence in Dimension Three,
   J. Reine Angew. Math. 636 (2009), 193–236. arXiv:0803.2990

5. J. Kamnitzer. *Knot Homology Via Derived Categories of Coherent Sheaves I, sl(2) Case*,
   Duke Math Journal 142 (2008), no. 3, 511–588. math.AG/0701194

4. *The Abelian Monodromy Extension Property for Families of Curves*,
   Math. Annalen 344 (2009) no. 3, 717–747. arXiv:0709.3320

3. D. M. Jackson. *On Tutte's Chromatic Invariant*,
   Trans. Amer. Math. Soc. 362 (2010), 509–535.

2. D. M. Jackson.
   The Matrix of Chromatic Joins and the Temperley-Lieb Algebra,
   J. of Combinatorial Theory series B. 89 (2003), no. 1, 109–155.

1. F. Mignosi, J. Shallit, M. Wang, S. Yazdani.
   Periodicity, Morphisms, and Matrices,
   Theoret. Comput. Sci. 295 (2003), no. 1-3, 107–121.