

PUBLICATION LIST

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Articles Published in Refereed Journals.

- (1) “Categorified Algebra and Quantum Mechanics”, *Theory and Applications of Categories*, vol 16, pp 785-854, 2006 (68 pages)
- (2) “Double Bicatagories and Double Cospans”, *Journal of Homotopy and Related Structures*, vol 4, no. 1 (35 pages)
- (3) “2-Vector Spaces and Finite Groupoids”, *Applied Categorical Structures*, vol 19, no. 4 pp659-707. (44 pages)
- (4) “Cohomological Twisting of 2-Linearization and Extended TQFT”, accepted by *Journal of Homotopy and Related Structures* (54 pages)

Articles Submitted to Refereed Journals.

- (1) “The Categorified Heisenberg Algebra I: A Combinatorial Representation”, arXiv:1207.2054 (with Jamie Vicary), changes requested by *Journal of Pure and Applied Algebra*
- (2) “Transformation Double Categories Associated to 2-Group Actions”, arXiv:1401.0149 (with Roger Picken), Submitted to *Theory and Applications of Categories*

Other Published Work.

- (1) “Extended TQFT’s and Quantum Gravity”. Ph.D. Thesis, Department of Mathematics, University of California, Riverside, 2007.
- (2) “Existence and Nonexistence Theorems for Solutions to the Einstein-Dirac-Maxwell Equations” Masters Thesis, Department of Mathematics and Statistics, McGill University, 2001.

Other Publicly Available Work.

- (1) “Groupoidification and Categorification in Physics” (currently hosted at <http://www.theoreticalatlas.net/papers/gpd-cat-phys.pdf>)

Work In Progress.

- (1) “The Categorified Heisenberg Algebra II: Free Structures in a Bicategory,” (Joint work with Jamie Vicary)
- (2) “2-Group Actions on Moduli Spaces of Higher Gauge Theory” (Joint work with Roger Picken)
- (3) “Extended TQFT in Hilbert Bimodules” (Joint work with Derek Wise)