

**Articles Published in
Refereed Journals**

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

**Articles Submitted to
Refereed Journals**

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

Other Published Work

- “Extended TQFT’s and Quantum Gravity”. Ph.D. Thesis, Department of Mathematics, University of California, Riverside, 2007.
- “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**

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

Work In Progress

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