

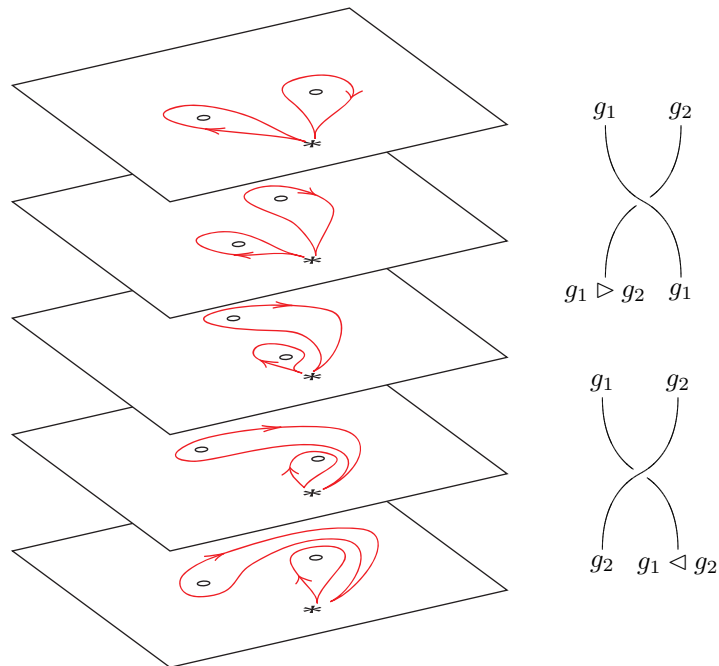
Loop Braids and Quandles

Derek K. Wise

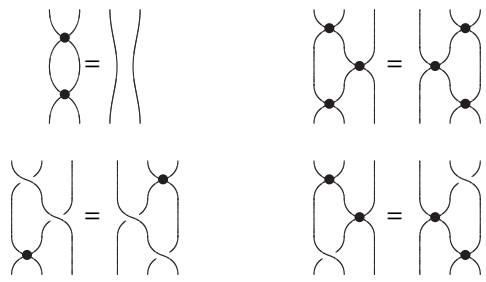
derek@math.ucr.edu

<http://math.ucr.edu/~derek>

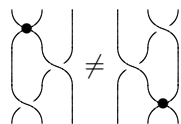
Braids:



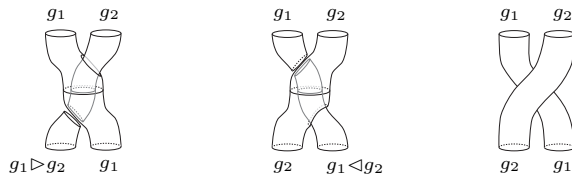
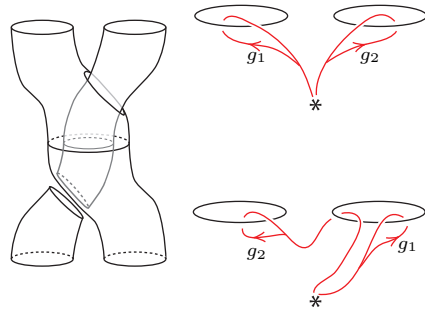
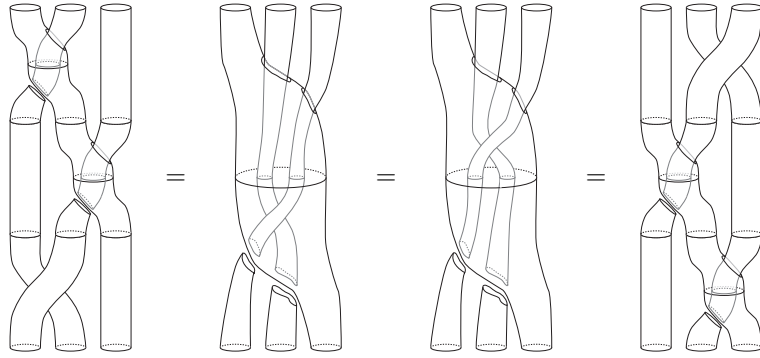
Welded braids:



Note:



Loop Braids:



For details, references, and application to physics see:

J. C. Baez, A. S. Crans, D. K. Wise, Exotic statistics for strings in 4d BF theory, preprint gr-qc/0603085.