

HIGHER BIBLIOGRAPHY

SSP, JANUARY 2006

- Urs Schreiber John Baez. Higher gauge theory: 2-connections on 2-bundles, 2004, arXiv:hep-th/0412325 – looks like the most advanced text Baez has with regard to higher categories and their use for 2-bundles and 2-connections on 2-bundles.
- John C. Baez and Aaron D. Lauda. Higher-dimensional algebra. V. 2-groups. *Theory Appl. Categ.*, 12:423–491 (electronic), 2004, math.QA/0307200 – introducing 2-groups and various equivalent ways to think about them. Includes definitions, string diagrams, coherent 2-groups, crossed modules.
- Magnus Forrester-Barker. Group Objects and Internal Categories, arXiv:math.CT/0212065 – basics on 2-groups.
- John C. Baez and Alissa S. Crans. Higher-Dimensional Algebra VI: Lie 2-Algebras. *Theory and Applications of Categories*, 12:492–528, 2004, arXiv:math.QA/0307263 – the analogue of part V above for Lie-2-algebras.
- Toby Bartels. *Higher gauge theory: 2-bundles*. PhD thesis, University of California, Riverside, 2006 – definition of 2-bundles using *many* diagrams and comparing the categorified picture to its uncategorified analogue.
- Hendryk Pfeiffer. Higher gauge theory and a non-abelian generalization of 2-form electrodynamics. *Ann. Physics*, 308(2):447–477, 2003, hep-th/0303074 – 2-groups again, with lattices and physics in mind.
- Lawrence Breen and William Messing. Differential Geometry of Gerbes, math.AG/0106083 – introducing fake curvature (definition 4.2, p. 28)
- M. K. Murray. Bundle gerbes. *J. London Math. Soc. (2)*, 54(2):403–416, 1996, dg-ga/9407015 – bundle gerbes, essentially the same as the ‘higher’ picture?
- Francis Borceux. *Handbook of categorical algebra*, volume 50-52 of *Encyclopedia of Mathematics and its Applications*. Cambridge University Press, Cambridge, 1994 – higher category definitions at the end of volume 1.