

WHAT COMES NEXT? SUGGESTIONS FOR FURTHER READING

What comes next?

- More on Temperley-Lieb-Jones
 - Vaughan F. R. Jones. “The annular structure of subfactors”. In: *Essays on geometry and related topics, Vol. 1, 2*. Vol. 38. Monogr. Enseign. Math. [MR1929335](#). Geneva: Enseignement Math., 2001, pp. 401–463
 - Vaughan F. R. Jones and Sarah A. Reznikoff. “Hilbert space representations of the annular Temperley-Lieb algebra”. *Pacific J. Math.* vol. 228 (2) (2006). [MR2274519](#) [DOI:10.2140/pjm.2006.228.219](#), pp. 219–249
 - Scott Morrison. *A formula for the Jones-Wenzl projections*. [arXiv:1503.00384](#). 2002
 - Joshua Chen. *The Temperley-Lieb categories and skein modules*. [arXiv:1502.06845](#). 2014
- Category theory
 - Tom Leinster. *Basic Category Theory*. [arXiv:1612.09375](#). 2016
 - Emily Riehl. *Category theory in context*. <http://www.math.jhu.edu/~eriehl/context.pdf>. 2016
- Tensor categories, algebra objects, module categories
 - Pavel Etingof, Shlomo Gelaki, Dmitri Nikshych, and Victor Ostrik. *Tensor categories*. Vol. 205. Mathematical Surveys and Monographs. [MR3242743](#) <http://www-math.mit.edu/~etingof/egnobookfinal.pdf>. American Mathematical Society, Providence, RI, 2015, pp. xvi+343
 - Pavel Etingof, Dmitri Nikshych, and Viktor Ostrik. “On fusion categories”. *Ann. of Math.* (2) vol. 162 (2) (2005). [arXiv:math.QA/0203060](#) [MR2183279](#) [DOI:10.4007/annals.2005.162.581](#), pp. 581–642
 - Victor Ostrik. “Module categories, weak Hopf algebras and modular invariants”. *Transform. Groups* vol. 8 (2) (2003). [MR1976459](#) [arXiv:math/0111139](#), pp. 177–206
 - Pavel Etingof, Dmitri Nikshych, and Victor Ostrik. “Fusion categories and homotopy theory”. *Quantum Topol.* vol. 1 (3) (2010). (with an appendix by Ehud Meir), [arXiv:0909.3140](#) [MR2677836](#) [DOI:10.4171/QT/6](#), pp. 209–273
- Subfactors and tensor categories
 - Michael Müger. “From subfactors to categories and topology. I. Frobenius algebras in and Morita equivalence of tensor categories”. *J. Pure Appl. Algebra* vol. 180 (1-2) (2003). [MR1966524](#) [DOI:10.1016/S0022-4049\(02\)00247-5](#) [arXiv:math.CT/0111204](#), pp. 81–157
 - Michael Müger. “From subfactors to categories and topology. II. The quantum double of tensor categories and subfactors”. *J. Pure Appl. Algebra* vol. 180 (1-2) (2003). [MR1966525](#) [DOI:10.1016/S0022-4049\(02\)00248-7](#) [arXiv:math.CT/0111205](#), pp. 159–219
 - Dietmar Bisch. “Bimodules, higher relative commutants and the fusion algebra associated to a subfactor”. In: *Operator algebras and their applications (Waterloo, ON, 1994/1995)*. Vol. 13. Fields Inst. Commun. [MR1424954](#) (preview at [google books](#)). Providence, RI: Amer. Math. Soc., 1997, pp. 13–63

- David Penneys. *The 2-category of tracial von Neumann algebras*. <https://people.math.osu.edu/penneys.2/PenneysINI2017.pdf>. 2017
- Marcel Bischoff, Yasuyuki Kawahigashi, Roberto Longo, and Karl-Henning Rehren. *Tensor categories and endomorphisms of von Neumann algebras—with applications to quantum field theory*. Vol. 3. SpringerBriefs in Mathematical Physics. MR3308880 DOI:10.1007/978-3-319-14301-9. Springer, Cham, 2015, pp. x+94
- Adjectives on tensor categories
 - John W. Barrett and Bruce W. Westbury. “Spherical categories”. *Adv. Math.* vol. 143 (2) (1999). [arXiv:hep-th/9310164](https://arxiv.org/abs/hep-th/9310164) MR1686423 DOI:10.1006/aima.1998.1800, pp. 357–375
 - P. Selinger. “A survey of graphical languages for monoidal categories”. In: *New structures for physics*. Vol. 813. Lecture Notes in Phys. [arXiv:0908.3347](https://arxiv.org/abs/0908.3347) DOI:10.1007/978-3-642-12821-9_4. Springer, Heidelberg, 2011, pp. 289–355
 - Bruce Bartlett. *Fusion categories via string diagrams*. 1502.02882. 2015
- Examples of planar algebras
 - Scott Morrison, Emily Peters, and Noah Snyder. “Skein theory for the \mathcal{D}_{2n} planar algebras”. *J. Pure Appl. Algebra* vol. 214 (2) (2010). [arXiv:math/0808.0764](https://arxiv.org/abs/math/0808.0764) MR2559686 DOI:10.1016/j.jpaa.2009.04.010, pp. 117–139
 - Stephen Bigelow. “Skein theory for the ADE planar algebras”. *J. Pure Appl. Algebra* vol. 214 (5) (2010). [arXiv:math.QA/0903.0144](https://arxiv.org/abs/math.QA/0903.0144) MR2577673 DOI:10.1016/j.jpaa.2009.07.010, pp. 658–666
 - Emily Peters. “A planar algebra construction of the Haagerup subfactor”. *Internat. J. Math.* vol. 21 (8) (2010). [arXiv:0902.1294](https://arxiv.org/abs/0902.1294) MR2679382 DOI:10.1142/S0129167X10006380, pp. 987–1045
 - Stephen Bigelow, Scott Morrison, Emily Peters, and Noah Snyder. “Constructing the extended Haagerup planar algebra”. *Acta Math.* vol. 209 (1) (2012). [arXiv:0909.4099](https://arxiv.org/abs/0909.4099) MR2979509 DOI:10.1007/s11511-012-0081-7, pp. 29–82
 - Scott Morrison, Emily Peters, and Noah Snyder. “Knot polynomial identities and quantum group coincidences”. *Quantum Topol.* vol. 2 (2) (2011). [arXiv:1003.0022](https://arxiv.org/abs/1003.0022) MR2783128 DOI:10.4171/QT/16, pp. 101–156
 - Greg Kuperberg. “Spiders for rank 2 Lie algebras”. *Comm. Math. Phys.* vol. 180 (1) (1996). [arXiv:q-alg/9712003](https://arxiv.org/abs/q-alg/9712003) MR1403861 euclid.cmp/1104287237, pp. 109–151 (Warning: the arXiv version has many broken formulas)
 - Greg Kuperberg. “The quantum G_2 link invariant”. *Internat. J. Math.* vol. 5 (1) (1994). [arXiv:math.QA/9201302](https://arxiv.org/abs/math.QA/9201302) MR1265145 DOI:10.1142/S0129167X94000048, pp. 61–85
 - Zeph A. Landau. “Exchange relation planar algebras”. In: *Proceedings of the Conference on Geometric and Combinatorial Group Theory, Part II (Haifa, 2000)*. Vol. 95. 2002, pp. 183–214
- Quantum groups
 - Christian Kassel. *Quantum groups*. Vol. 155. Graduate Texts in Mathematics. New York: Springer-Verlag, 1995, pp. xii+531
 - Bojko Bakalov and Alexander Kirillov Jr. *Lectures on tensor categories and modular functors*. Vol. 21. University Lecture Series. MR1797619. Providence, RI: American Mathematical Society, 2001, pp. x+221 (First 3 chapters)
 - Zhenghan Wang. *Topological quantum computation*. Vol. 112. CBMS Regional Conference Series in Mathematics. DOI:10.1090/cbms/112 MR2640343. Published for the

- Conference Board of the Mathematical Sciences, Washington, DC; by the American Mathematical Society, Providence, RI, 2010, pp. xiv+115
- Sergey Neshveyev and Lars Tuset. *Compact quantum groups and their representation categories*. Vol. 20. Cours Spécialisés [Specialized Courses]. MR3204665 <https://folk.uio.no/sergeyn/papers/CQGRC.pdf>. Société Mathématique de France, Paris, 2013, pp. vi+169
 - The classification of finite index subfactors
 - Uffe Haagerup. “Principal graphs of subfactors in the index range $4 < [M : N] < 3 + \sqrt{2}$ ”. In: *Subfactors (Kyuzeso, 1993)*. MR1317352. World Sci. Publ., River Edge, NJ, 1994, pp. 1–38
 - Vaughan F. R. Jones, Scott Morrison, and Noah Snyder. “The classification of subfactors of index at most 5”. *Bull. Amer. Math. Soc. (N.S.)* vol. 51 (2) (2014). [arXiv:1304.6141](https://arxiv.org/abs/1304.6141) MR3166042 DOI:10.1090/S0273-0979-2013-01442-3, pp. 277–327
 - Narjess Afzaly, Scott Morrison, and David Penneys. *The classification of subfactors with index at most $5\frac{1}{4}$* . [arXiv:1509.00038](https://arxiv.org/abs/1509.00038). 2015
 - Frank Calegari, Scott Morrison, and Noah Snyder. “Cyclotomic integers, fusion categories, and subfactors”. *Comm. Math. Phys.* vol. 303 (3) (2011). [arXiv:1004.0665](https://arxiv.org/abs/1004.0665) MR2786219 DOI:10.1007/s00220-010-1136-2, pp. 845–896
 - Classifications of small planar algebras
 - Dietmar Bisch and Vaughan F. R. Jones. “Singly generated planar algebras of small dimension”. *Duke Math. J.* vol. 101 (1) (2000). MR1733737 DOI:10.1215/S0012-7094-00-10112-3 euclid.dmj/1092749081, pp. 41–75
 - Dietmar Bisch and Vaughan Jones. “Singly generated planar algebras of small dimension. II”. *Adv. Math.* vol. 175 (2) (2003). MR1972635 DOI:10.1016/S0001-8708(02)00060-9, pp. 297–318
 - Dietmar Bisch, Vaughan F.R. Jones, and Zhengwei Liu. *Singly generated planar algebras of small dimension, Part III*. [arXiv:1410.2876](https://arxiv.org/abs/1410.2876). 2014
 - Scott Morrison, Emily Peters, and Noah Snyder. “Categories generated by a trivalent vertex”. *Selecta Math. (N.S.)* vol. 23 (2) (2017). [arXiv:1501.06869](https://arxiv.org/abs/1501.06869) DOI:10.1007/s00029-016-0240-3 MR3624901, pp. 817–868
 - Braided and modular categories
 - Eric Rowell, Richard Stong, and Zhenghan Wang. “On classification of modular tensor categories”. *Comm. Math. Phys.* vol. 292 (2) (2009). MR2544735 [arXiv:0712.1377](https://arxiv.org/abs/0712.1377) DOI:10.1007/s00220-009-0908-z, pp. 343–389
 - Michael Müger. “Modular Categories”. In: *Compositional methods in quantum physics and linguistics*. Ed. by Mehrnoosh Sadzadeh Chris Heunen and Edward Grefenstette. Available at <http://www.math.ru.nl/~mueger/PDF/oxford.pdf>. Oxford University Press, 2013