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 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 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 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 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 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 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 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 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 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 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. 2015
  - Frank Calegari, Scott Morrison, and Noah Snyder. "Cyclotomic integers, fusion categories, and subfactors". *Comm. Math. Phys.* vol. 303 (3) (2011). arXiv: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. 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 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 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 Sadrzadeh Chris Heunen and Edward Grefenstette. Available at http://www.math.ru.nl/~mueger/PDF/oxford.pdf. Oxford University Press, 2013
- Connections to topological quantum computing, and topological phases of matter
  - **1705.06206**