0.1. **Talk 1: Sander.** Overview of moduli spaces of manifolds.


0.3. **Talk 3: Robin.** Group completion. This is like Talk 4 from the Talbot list, but only the first two paragraphs on their syllabus. Actually give a sketch/proof of the group completion theorem. If you have time, talk about relation of group completion to homological stability? See also Theorem 20.29 in [5] and [7] For the group completion theorem for topological categories, see Lemma 4.17 of [1].

0.4. **Talk 4: Dexter.** Barratt-Priddy-Quillen-Segal theorem. This should talk about delooping and the scanning map. Put things together with group completion to prove BPQS. Say we’ll eventually see this as a 0-dimensional case of things. See Sander’s class notes [5] Lecture 32.

0.5. **Talk 5.** Cobordism categories. Define cobordism categories like Talk 1 of Talbot. Explain how 0-dimensional relates to BPQS and how 2-dimensional relates to Mumford conjecture. What’s 1-dimensional? Relate cobordism categories to moduli spaces of manifolds. Maybe state GMTW.

0.6. **Talk 6.** Group completion for cobordism categories. This is the rest of Cob. Cat. Talk 4 from Talbot. Focusing on 2-dimensions and the [6] reference.

0.7. **Talk 7.** Positive scalar curvature. Give the necessary background for homotopy theorist to understand what scalar curvature should feel like. Give lots of examples and pictures.

0.8. **Talbot Week.**

0.9. **Post Talbot.** Post-Talbot will be on [3].
References

[1] Galatius, S. *Stable homology of automorphism groups of free groups.*
[6] Madsen, I. and Tillman, U. *The stable mapping class group and \( \mathbb{Q}(\mathbb{C}P^\infty) \).*