Main Topics, Timelines, and Speakers

We will be starting with section 2 of Shachar et al.'s paper on Ambidexterity and Height[1], before moving into the initial main reference, which will be the first part of Bastiaan Cnossen's thesis[2], with other references/possible directions being Hilman, Kirstein, and Kremer's generalization of twisted ambidexterity in[3], as well as applications of ordinary ambidexterity to chromatic homotopy theory in[4]. Depending on interest we could also look into the related notions of higher semi-additivity appearing in[5] and[6].

Timeline

- ◯ September 15th: Sections 2.1-2.2 of[1-1] (Ea/E)
- ◯ September 22nd: TBD
- ◯ September 29th: TBD
- ◯ October 6th: TBD
- ◯ October 13th: TBD
- ◯ October 20th: TBD
- ◯ October 27th: TBD
- ◯ November 3rd: TBD
- ◯ November 10th: TBD
- ◯ November 17th: TBD
- ◯ November 24th: TBD
- ◯ December 1st: TBD
- ◯ December 8th: TBD

Group's Interests from First Meeting

- ◯ Parameterized equivariant things
- ◯ Elliptic cohomology connections (might use some of the chromatic applications)

Overview of Sections in Bastiaan's Thesis

Twisted Ambidexterity in Equivariant Homotopy

- ◯ Parameterized ∞-categories (Supplement with details from[7], [8], [9], and[10] as desired)
  - ◯ Brief Overview
  - ◯ $\mathcal{C}$-linear functors

- Formal inversions
- Twisted Ambidexterity (Supplement with[3-1] for generalizations to non-presentable ∞-categories and applications to Poincare duality)
  - Twisted Norm Map
  - Relation to Parameterized Semiadditivity and Classical Ambidexterity
  - Costenoble-Waner Duality
- Equivariant Homotopy
  - Parameterized genuine G-spectra
  - Twisted Ambidexterity for "..."
  - Orbispectra
  - Proper Equivariant Homotopy Theory

Relative Poincare Duality for Differentiable Stacks

- Foundations on Differentiable Stacks
- Geometry of Differentiable Stacks
- Genuine Sheaves
- Localization Sequences
- Relative Poincare Duality

Appendix

- Symmetric Monoidal Un/straightening (Refs[11], [12])
- Duality in Equivariant Stable Homotopy Theory
- ~~Smooth Manifolds~~
- Lie groupoids
- Recollections on ∞-topoi
- Calculus of Mates

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