

Things fixed

General

1. Fixed a counting error in letter-indexed results in introductions to the papers. These counter was not reset at a new chapter.

Introduction

1. Fixed typo in third paragraph of the information section (page iv)
2. Fixed a typo in the second paragraph of the laypersons introduction section
3. Removed double word "modern" on page 3 (in the laypersons introduction)
4. Added missing "s" in paragraph after Remark 0.2.8
5. Removed double "is" from Example 0.2.11
6. Remove double "we" after Remark 0.2.20
7. Added missing "can" in Remark 0.2.40
8. Fix typo in remark 0.2.42
9. Fixed typo "these \rightarrow this" just before Definition 0.2.53
10. Added missing word "as" in proof of Proposition 0.2.82
11. Removed a double "is" in paragraph after 0.2.82
12. Removed extra "s" in Remark 0.2.86
13. Fixed sentence with dualizables \rightarrow dualizable objects in Remark 0.2.89
14. Added missing "s" in the first paragraph of section 0.2.4
15. Removed extra "a" in Example 0.2.104
16. Fixed typo "super script" in Remark 0.2.118
17. Fix missing word "approach" before definition 0.2.120
18. Rixed typo in Remark 0.2.125
19. Fixed typo in Remark 0.2.136

Paper 1

1. Fixed two typos in the description of the drawing
2. Added an apostrophe "" in the acknowledgements section
3. Fixed typo in the paragraph before Definition 1.2.15.
4. Fixed typo in Remark 1.3.2

5. Added two "a"'s in Remark 1.3.11
6. Fixed typo in paragraph before Construction 1.3.12.
7. Fixed inequality in Definition 1.3.18 from $d + 1 - q > 0$ to $q + 1 - d > 0$
8. Fixed typo in the proof of Lemma 1.4.1
9. Fixed discussion on page 64. It was both claimed that 1.4.17 was proven and an open conjecture. It is now stated as a theorem.

Paper 2

1. Fixed typo in the description of the drawing
2. Fixed typo in abstract
3. Fixed typo in paragraph before motivation section
4. Fixed typo in statement of Theorem 2.B
5. Fixed typo (extra n) in the second paragraph of section 2.2
6. Added citation before Definition 2.2.2
7. Changed some \mathcal{D} 's to \mathcal{E} 's, and vice versa, in Definition 2.2.6, Remark 2.2.9, Definition 2.2.10 and Remark 2.2.11, to be consistent with the relation to a general adjunction $F : \mathcal{D} \rightleftarrows \mathcal{E} : G$. Now all monads are on \mathcal{D} and comonads on \mathcal{E} , consistent with the adjunction.
8. Moved Remark 2.2.16 about internal adjunction to 2.2.13.
9. Split example 2.2.13 into two (now 2.2.14 and 2.2.15), removed citation to 1-categorical situation as it was confusing how it was used. Described more directly how the functors get their comonad and monad structures.
10. Rewrote Remark 2.2.26 in light of the new monoidal structure on $Comod_C$
11. Removed the mention of coseparable coalgebras from Definition 2.3.1, as with the changes below it was no longer used in the paper. Also removed Remark 2.3.2 in light of this change.
12. Moved remark 2.3.7 (Now 2.3.3) about uniqueness of comodule structures to after Lemma 2.3.3. Also rewrote it.
13. Fixed the argument in Lemma 2.3.3 (now 2.3.2), so that it does not use the co-bar construction to give the symmetric monoidal structure.
14. Removed the $\simeq C \otimes (- \otimes -)$ from the proof of Lemma 2.3.4
15. Added a comma in Remark 2.3.5
16. Removed Lemma 2.3.6 about retracts of cofree comodules, as it is not needed and clutters the understanding of the material

17. Removed Proposition 2.3.8, about retracts of free contramodules as it is no longer needed
18. Small changes and expansions upon the proof of Lemma 2.3.10 (Now 2.3.7). In particular tried to show more clearly how [Nik16] is used.
19. Added Remark 2.3.8 about the monoidal structure on Contra_C
20. Added Remark 2.3.9 about the non-smashingness of the free contramodule functor, and its smashingness when the coalgebra C is dualizable.
21. Updated the internal references in the proof of Theorem 2.3.11 (now 2.3.10) due to the above changes.
22. Remove double "to" in first paragraph of section 2.3.2
23. Fixed typo in 2.3.14 (now 2.3.13)
24. Reworded the definition of the functor Λ in construction 2.3.15 (now 2.3.14), so that it is clearer how it is defined. Also fixed a missing ":".
25. Rewritten the proof of Theorem 2.3.17 (now 2.3.16), making it more clear how Λ is related to $\underline{\text{Hom}}(\Gamma 1, -)$, and more clear where each part of the statement is proven.
26. Added callback to the functor $V = \underline{\text{Hom}}(L1, -)$ from the proof of positselski duality in Remark 2.3.22 (now 2.3.21)
27. Removed a comma in the first paragraph of the Derived completion example section
28. Fixed typo in Remark 2.A.1
29. Fix typo in paragraph before construction 2.A.2
30. After construction 2.A.2, there was an arrow missing, which has been added: more specifically, the arrow $c: C^{dual} \longrightarrow \text{Pro}(C^{dual})$
31. Added a missing "is" in the proof of 2.A.18.
32. Fix typo in Remark 2.A.19
33. Fix typo in paragraph after Remark 2.A.19
34. Fixed typo in proof of 2.A.20

Paper 3

1. Fixed a typo in the second paragraph in Introduction (section 3.1)
2. Fixed a typo in the paragraph before Theorem 3.B
3. Fixed a typo in the paragraph before Definition 3.2.9.
4. Removed a double "category" in example 3.2.10
5. Fixed two typos in Definition 3.2.39

6. Fixed the wrong indexing in the long exact sequence of homotopy groups in the proof of Theorem 3.3.11
7. Fixed a typo in Conjecture 3.3.15
8. Fixed two typos in the paragraph before 3.3.17
9. Fixed a typo in Remark 3.3.40
10. Fixed a typo in Remark 3.3.47
11. Typo in Definition 3.A.3
12. Added missing "the heart of the" when discussing the t-structure of $LSyn_E$ before Theorem 3.A.6
13. Missing "can" in first paragraph in section 3.A.4. Fixed another typo.
14. Fixed a typo in the paragraph before Theorem 3.A.6
15. Fixed a typo in the proof of Theorem 3.A.8
16. Fixed a typo in the paragraph before Theorem 3.A.24
17. Fixed a typo in Construction 3.A.25
18. Fixed a typo in the proof of Lemma 3.A.26
19. Fixed typo in Lemma 3.A.28
20. Fixed typo in first paragraph in section 3.A.4
21. Typo with double point "." when citing Warning 3.30 of Barkan's paper.
22. Exchanged "stable" for "prestable" in the second paragraph of section 3.A.4
23. Fixed proof of Lemma 3.A.33, as it did not explain why $Stable_{E_*E}$ was Postnikov complete at large primes.
24. Fixed typo in cohomological dimension of I_n -torsion comodules in Remark 3.A.35.
25. Added Lemma 3.A.37 and corollary 3.A.38, as Barkan's result needs Postnikov complete to work, and we did not comment on this for $LSyn_E$ of $MSyn_E$.