

A Focused Sequent Calculus System of Skew Monoidal Closed Categories

Tarmo Uustalu

Niccolò Veltri

Cheng-Syuan Wan

1 Introduction

Recent discoveries on skew monoidal categories [3] [1] [2] (check references in previous papers, at least include papers cited by previous three papers) provide us a good reasons to study their corresponding proof systems. In previous work [4] [5] [6] [7], sequent calculus proof

References

- [1] Stephen Lack and Ross Street. Skew monoidales, skew warpings and quantum categories. *Theory and Applications of Categories*, 26:385–402, 2012. Comment: Minor changes and some renumbering in this version.
- [2] Stephen Lack and Ross Street. Triangulations, orientals, and skew monoidal categories. *Advances in Mathematics*, 258:351–396, 2014.
- [3] Kornél Szlachányi. Skew-monoidal categories and bialgebroids. *Advance in Mathematics*, 231:1694–1730, 2012.
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- [4] Tarmo Uustalu, Niccolò Veltri, and Noam Zeilberger. The sequent calculus of skew monoidal categories. *Electronic Notes in Theoretical Computer Science*, 341:345–370, 2018.
- [5] Tarmo Uustalu, Niccolò Veltri, and Noam Zeilberger. Deductive systems and coherence for skew prounital closed categories. *EPTCS*, 332:35–53, 2020.
- [6] Tarmo Uustalu, Niccolò Veltri, and Noam Zeilberger. Proof theory of partially normal skew monoidal categories. *EPTCS*, 333:230–246, 2020.
- [7] Niccolò Veltri. Coherence via focusing for symmetric skew monoidal categories. pages 184–200. Springer International Publishing, 2021.