

On Connections Between the Kashiwara-Vergne Equations and the Finite-Type Theory of Virtual and Welded Knots

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Introduction

This is the introduction.

Acknowledgements

These are the acknowledgements.

Chapter 1

Finite Type Theory

1.1 Knots and Tangles

This is a reference to [[Ada94](#)].

1.2 Finite Type Invariants and Chord Diagrams

Chapter 2

Virtual and Welded Knots

2.1 Virtual Knots and Welded Knots

2.2 Arrow Diagrams

Chapter 3

Existing Topological Interpretations of the Kashiwara Vergne Equations

3.1 Lie Theory

3.2 Goldman-Turaev

3.3 Welded Foams

Chapter 4

Uniting them via Emergent Tangles

4.1 Hopf Algebras

4.2 Emergent Tangles

Chapter 5

Virtual Knot Tabulation?

Appendix A

appendixname

This is the first appendix. The subject will be bialgebras.

References

- [Ada94] C.C. Adams. *The Knot Book*. W.H. Freeman, 1994. ISBN: 9780821886137. URL: https://www.math.cuhk.edu.hk/course_builder/1920/math4900e/Adams--The%20Knot%20Book.pdf.