Formal Verification of Knowledge Production Systems

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Abstract

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This thesis presents Kleis, a formal verification system for knowledge production.

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1 Chapter 1: Introduction

Knowledge production relies on precise notation and rigorous verification.

2 Chapter 2: Background

We build on prior work in formal verification and type theory.

3 Chapter 3: The Kleis System

Kleis is built on structures, axioms, and templates.

4 Chapter 4: Evaluation

We evaluate Kleis on tensor calculus and protocol verification.

5 Chapter 5: Conclusion

We have presented Kleis, a substrate for formal knowledge production.

6 References

[demoura2008] de Moura, L. Z3: An Efficient SMT Solver. TACAS 2008.