#### DEPARTMENT OF INFORMATICS

TECHNISCHE UNIVERSITÄT MÜNCHEN

Bachelor's Thesis in Informatics

## Combatting the Precision Loss of Partial Contexts in Abstract Interpretation

Felix Sebastian Krayer

#### DEPARTMENT OF INFORMATICS

#### TECHNISCHE UNIVERSITÄT MÜNCHEN

Bachelor's Thesis in Informatics

# Combatting the Precision Loss of Partial Contexts in Abstract Interpretation

# Bekämpfung des Präzisionsverlust durch partielle Kontexte in Abstrakter Interpretation

Author: Felix Sebastian Krayer

Supervisor: Supervisor Advisor: Advisor

Submission Date: 15th of February 2023

I confirm that this bachelor's thesis in informatics is my own work and I have documented all sources and material used.	
Munich, 15th of February 2023	Felix Sebastian Krayer



#### **Abstract**

#### **Contents**

A	knowledgments	iii
Αl	stract	iv
1	Introduction	1
2	Background 2.1 Related Work	. 2
3	Main Contributions  3.1 Taint analysis	. 3 . 3
4	Evaluation 4.1 Testing	
5	Conclusion	5
Li	t of Figures	6
Li	t of Tables	7

#### 1 Introduction

 $"[Goblint\ is\ ] a\ static\ analyzer\ for\ multi-threaded\ C\ programs,\ specializing\ in\ finding\ concurrency\ bugs."\ (Copypaste\ from\ https://goblint.in.tum.de/)$ 

## 2 Background

2.1 Related Work

#### 3 Main Contributions

- 3.1 Taint analysis
- 3.1.1 Fromal description
- 3.1.2 Implementation
- 3.2 Benefiting other Analyses

#### 4 Evaluation

- 4.1 Testing
- 4.2 Benchmarking

#### 5 Conclusion

### **List of Figures**

#### **List of Tables**