

# Implementation of satisfiability algorithms of non-Fregean logic SCI

Adrian Siwiec

15 kwietnia 2024

## 1 Sentential logic and the Fregean axiom

## 2 SCI

### 2.1 ...

### 2.2 Axiomatization of SCI

## 3 Satisfiability in SCI

### 3.1 SCI is decidable

### 3.2 Decision procedures

#### 3.2.1 $T$ decision procedure

#### 3.2.2 $T^*$ decision procedure

## 4 Implementation

### 4.1 Data structures

### 4.2 Optimizations

## 5 Comparison of $T$ and $T^*$ systems

### 5.1 Size of produced proof trees

### 5.2 Time complexity

### 5.3 Real time