

# The Skeptik Proof Compression System

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**Abstract.** This paper describes **Skeptik**: a system for compressing and improving proofs obtained by automated reasoning tools.

## 1 Introduction

## 2 User Interface

## 3 Supported Proof Formats

### 3.1 TraceCheck Format

### 3.2 The veriT Proof Format

### 3.3 The Skeptik Proof Format

## 4 Available Proof Compression Algorithms

### 4.1 RPI

### 4.2 LU

### 4.3 LUniv

### 4.4 RedRec

### 4.5 Split

### 4.6 TautologyElimination

### 4.7 StructuralHashing

### 4.8 DAGification

### 4.9 Subsumption

### 4.10 Pebbling

## 5 Implementation Details

ToDo: statistics about the code

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## **5.1 Organization of the Code**

ToDo: brief description of the package structure

## **5.2 Data Structures for Formulas**

## **5.3 Data Structures for Proofs**

## **5.4**

## **6 Conclusions and Future Work**

ToDo: limitation: memory consumption in Scala underlying symbols are strings

## **References**