

**Veanes, Margus; Bjørner, Nikolaj; de Moura, Leonardo**

**Symbolic automata constraint solving.** (English) [Zbl 1306.68097](#)

Fermüller, Christian G. (ed.) et al., Logic for programming, artificial intelligence, and reasoning. 17th international conference, LPAR-17, Yogyakarta, Indonesia, October 10–15, 2010. Proceedings. Berlin: Springer (ISBN 978-3-642-16241-1/pbk). Lecture Notes in Computer Science 6397, 640-654 (2010).

Summary: Constraints over regular and context-free languages are common in the context of string-manipulating programs. Efficient solving of such constraints, often in combination with arithmetic and other theories, has many useful applications in program analysis and testing. We introduce and evaluate a method for symbolically expressing and solving constraints over automata, including subset constraints. Our method uses techniques present in the state-of-the-art SMT solver Z3.

For the entire collection see [\[Zbl 1197.68008\]](#).

**MSC:**

[68Q45](#) Formal languages and automata

[68T20](#) Problem solving in the context of artificial intelligence (heuristics, search strategies, etc.)

Cited in **7** Documents

**Software:**

[z3](#)

**Full Text:** [DOI](#)