

[McCune, William](#)

Solution of the Robbins problem. (English) Zbl 0883.06011
J. Autom. Reasoning 19, No. 3, 263-276 (1997).

Summary: We show that the three equations known as commutativity, associativity, and the Robbins equation are a basis for the variety of Boolean algebras. The problem was posed by Herbert Robbins in the 1930s. The proof was found automatically by EQP, a theorem-proving program for equational logic. We present the proof and the search strategies that enabled the program to find the proof.

MSC:

[06E05](#) Structure theory of Boolean algebras
[68T15](#) Theorem proving (deduction, resolution, etc.) (MSC2010)
[06-04](#) Software, source code, etc. for problems pertaining to ordered structures

Cited in **3** Reviews
Cited in **43** Documents

Keywords:

associative-commutative unification; paramodulation; Robbins algebra; commutativity; associativity; Robbins equation; variety of Boolean algebras; EQP; theorem-proving program for equational logic; search strategies

Full Text: [DOI](#)