

1094-03-189

Jonathan Stephenson* (jrs@math.uchicago.edu). *Isomorphisms between low_n and computable boolean algebras.*

A long-standing problem in the area of computable structures is to determine for which n every low_n boolean algebra is isomorphic to a computable boolean algebra. For those n where such isomorphisms exist, a related problem is that of determining how complicated the isomorphisms between low_n boolean algebras and computable algebras must be.

Harris and Montalbán have demonstrated the existence of a low_5 boolean algebra that is not isomorphic to any computable boolean algebra via a $\emptyset^{(7)}$ -computable map. Using Montalbán's machinery for diagonalizable structures, we can show that proofs in the style of Harris and Montalbán's exist for low_{n+2} boolean algebras whenever they exist for low_n boolean algebras. (Received August 23, 2013)