



**THE CLASS OF REPRESENTABLE CYLINDRIC ALGEBRAS
HAS NO CANONICAL AXIOMATIZATION**

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Abstract

Using a construction of Monk, in conjunction with deep results on relation algebras by Hirsch Hodkinson and Venema, we show that it is undecidable whether a finite simple cylindric algebra of dimension 3 has a representation, and that there is no canonical axiomatization of \mathbf{RCA}_3 . We then, using another construction, prove such results for cylindric algebras of every dimension.

Keywords and phrases: algebraic logic, cylindric algebras, relation algebras.

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