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On weak and strong interpolation in algebraic logics. (English) Zbl 1100.03021
J. Symb. Log. 71, No. 1, 104-118 (2006).

Summary: We show that there is a restriction, or modification of the finite-variable fragments of first-order logic in which a weak form of Craig's interpolation theorem holds but a strong form of this theorem does not hold. Translating these results into algebraic logic we obtain a finitely axiomatizable subvariety of finite-dimensional representable cylindric algebras that has the strong amalgamation property but does not have the superamalgamation property. This settles a conjecture of *D. Pigozzi* [*Algebra Univers.* 1, 269-349 (1972; [Zbl 0236.02047](#))].

MSC:

03C40 Interpolation, preservation, definability
03G15 Cylindric and polyadic algebras; relation algebras

Cited in 7 Documents

Keywords:

Craig interpolation; varieties of cylindric algebras; strong amalgamation; superamalgamation

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