

Georgescu, George; Iorgulescu, Afrodita**Pseudo-MV algebras.** (English) Zbl 1014.06008

Mult.-Valued Log. 6, No. 1-2, 95-135 (2001).

The authors present a precise analysis of pseudo-MV algebras which are categorically equivalent to arbitrary lattice-ordered groups. The notion of pseudo-MV algebra is a generalization of the notion of MV-algebra. Like the classical article of *C. C. Chang* [Trans. Am. Math. Soc. 88, 467-490 (1958; [Zbl 0084.00704](#))], this paper is foundational as much as possible. The terminology and the problem set is close to the monograph of *R. L. O. Cignoli, I. M. L. D'Ottaviano* and *D. Mundici* [Algebraic foundations of many-valued reasoning. Trends in Logic – Studia Logica Library. 7. Dordrecht: Kluwer Academic Publishers (2000; [Zbl 0937.06009](#))]. Moreover, in addition to those problems, a very influential section of this paper is contributed to the study of Pierce sheaves associated with pseudo-MV algebras, and Pierce representations of pseudo-MV algebras. The paper contains a number of open problems.

Reviewer: [Vladimir Komendantsky \(Dolgoprudny\)](#)**MSC:**

[06D35](#) MV-algebras
[03B50](#) Many-valued logic
[03G25](#) Other algebras related to logic
[06F15](#) Ordered groups

Cited in **13** Reviews
Cited in **158** Documents**Keywords:**

categorical equivalence; pseudo-MV algebra; l-group; normal ideal; Boolean center; Boolean sheaf; Pierce sheaves; Pierce representations