

A CHARACTERIZATION THEOREM
FOR COMPLETE MULTIALGEBRAS

COSMIN PELEA and IOAN PURDEA

Abstract. In this paper we will give a characterization for the complete multi-algebras, which involves universal algebras and their congruences.

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Key words. Universal algebra, congruence, complete multialgebra.

REFERENCES

- [1] PELEA, C. and BREAZ, S., *Multialgebras and term functions over the algebra of their nonvoid subsets*, Mathematica (Cluj), **43(66)** (2001), 143–149.
- [2] BURRIS S. and SANKAPPANAVAR H.P., *A course in universal algebra*, Springer-Verlag, New-York, 1981.
- [3] CORSINI, P., *Prolegomena of hypergroup theory*, Supplement to Riv. Mat. Pura Appl., Aviani Editore, Tricesimo, 1993.
- [4] CORSINI, P. and LEOREANU, V., *Applications of hyperstructure theory*, Kluwer Academic Publishers, Boston-Dordrecht-London, 2003.
- [5] GRÄTZER, G., *Universal algebra*, D. Van Nostrand Co., Inc., Princeton, N.J.-Toronto, Ont.-London, 1968.
- [6] PELEA, C., *On the fundamental relation of a multialgebra*, Ital. J. Pure Appl. Math., **10** (2001), 141–146.
- [7] PELEA, C., *On the direct product of multialgebras*, Studia Univ. Babeş-Bolyai Math., **48** (2003), 93–98.
- [8] PELEA, C., *Identities and multialgebras*, Ital. J. Pure Appl. Math., to appear.
- [9] PICKETT, H. E., *Homomorphisms and subalgebras of multialgebras*, Pacific J. Math., **21** (1967), 327–342.
- [10] PURDEA, I. and PIC, GH., *Tratat de algebră modernă*, Vol. I (in Romanian) [Treatise on modern algebra, Vol. I], Editura Academiei Republicii Socialiste România, Bucharest, 1977.

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“Babeş-Bolyai” University
Faculty of Mathematics and Computer Science
Str. M. Kogălniceanu nr. 1
400084 Cluj-Napoca, Romania
E-mail: cpelea@math.ubbcluj.ro
E-mail: purdea@math.ubbcluj.ro