

THE DATA DEPENDENCE FOR THE SOLUTIONS OF DARBOUX-IONESCU PROBLEM FOR A HYPERBOLIC INCLUSION OF THIRD ORDER

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Abstract. In this paper we consider the Darboux-Ionescu Problem for a third order hyperbolic inclusion with modified argument of the form

$$u_{xyz} \in F(x, y, z, u(f(x, y, z), g(x, y, z), h(x, y, z))).$$

We prove three existence theorems and, as corollaries, we obtain the data dependence results for the solutions of the considered problem.

Key Words and Phrases: Continuous multifunction, Lipschitzian multifunction, absolutely continuous function in Carathéodory's sense, Hausdorff-Pompeiu metric, hyperbolic inclusion

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