ON SOLVABILITY OF SOME NONLINEAR FRACTIONAL INTERVAL INTEGRAL EQUATIONS

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Abstract. In this paper, firstly we deal with solvability of a first kind nonlinear interval integral equation of fractional order. Then we present a theorem giving sufficient conditions for existence of solution of a second kind nonlinear interval integral equation of fractional order in the space of continuous interval-valued functions on the interval \([a, b]\) by using Banach fixed point theorem. We give also some examples satisfying the conditions of our main theorems.

Keywords and phrases: Interval-valued function; Interval integral equations; Nonlinear integral equations; Banach fixed point theorem; Existence of solutions.

REFERENCES