

Ardjouni, Abdelouaheb

Existence results for a Caputo-Hadamard type fractional boundary value problem. (English)

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Summary: The main purpose of this paper is to establish the existence and uniqueness of mild solutions for a Caputo-Hadamard type fractional boundary value problem. Existence and uniqueness results are based on the Krasnoselskii fixed point theorem and the Banach contraction mapping principle. Finally, two examples are given to illustrate this work.

MSC:

34A08 Fractional ordinary differential equations

34B15 Nonlinear boundary value problems for ordinary differential equations

47N20 Applications of operator theory to differential and integral equations

Keywords:

fractional boundary value problems; existence; uniqueness; fixed point theorems

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