EXISTENCE RESULTS FOR COUPLED NONLINEAR FRACTIONAL DIFFERENTIAL EQUATIONS WITH COUPLED STRIP AND INFINITE POINT BOUNDARY CONDITIONS

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Abstract. In this paper, we investigate a class of nonlinear fractional differential system supplemented with coupled strip and infinite point boundary conditions. Existence results for the given problem are obtained by using the Banach's fixed point theorem and the $\| \cdot \|_e$ norm. The Lipschitz type conditions on nonlinearities are needed and it seems that the continuity assumptions used previously are not sufficient. The proposed problem is of quite a general nature as it covers several special cases. Finally, we present an example to illustrate our main results.
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