AN EXTENSION SYSTEM OF SEQUENTIAL DIFFERENTIAL EQUATIONS OF ARBITRARY ORDER

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Abstract. We are concerned with an extension of a coupled sequential differential system of fractional type. Using the Banach contraction principle, we establish new results for the existence and uniqueness of solutions. Then, we prove another existence result via Schaefer's fixed point theorem. At the end, we illustrate one main result by an example.

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Key words. Caputo derivative, Hadamard derivative, fixed point, existence, sequential differential equation.

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