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J. Diego Ramirez* (diego.ramirez@lamar.edu), Department of Mathematics, 200 Lucas Building, P.O. Box 10047, Beaumont, TX 77710. *Generalized Monotone Method for Caputo Fractional Integro-Differential Equations of order q , $0 < q < 1$.*

In this work, we consider a first order fractional integro-differential equation with Caputo derivative of order q , $0 < q < 1$, and initial condition. In our case the forcing function is the sum of an increasing and decreasing function.

We define lower and upper solutions and will prove the existence of coupled minimal and maximal solutions by using a generalized monotone iterative technique where the iterates are solutions of linear Caputo fractional integro-differential equations with initial condition. (Received September 06, 2014)