

GENERALIZED MONOTONE ITERATIVE METHOD FOR INTEGRO DIFFERENTIAL EQUATIONS WITH PERIODIC BOUNDARY CONDITIONS

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Abstract. In this paper, we will develop a generalized monotone iterative method for first order nonlinear integro differential equations with periodic boundary conditions when the forcing function is the sum of an increasing and decreasing function. We obtain natural monotone sequences or alternating monotone sequences depending on the coupled upper and lower solution used and depending on the iterative scheme used to develop the sequence. These sequences converge to coupled extremal solutions of the integro differential equation.

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