

Existence of nonnegative solutions for a class of integral equations

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Abstract

In this paper, we are concerned with existence results for a system of nonlinear Hammerstein integral equations. We prove existence of at least one solution and two solutions, under suitable assumptions on the kernels and the nonlinearities. The arguments are based upon recent theoretical results on the fixed point theory for the sum of operators.

Keywords: System of nonlinear Hammerstein integral equation, existence, nonnegative solution, fixed point theory, sum of operators.

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