

LEGGETT–WILLIAMS FIXED POINT THEOREM TYPE FOR SUMS OF OPERATORS AND APPLICATION IN PDES

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Abstract. In this paper we present an extension of the original version of Leggett-Williams fixed point theorem for a k -set contraction perturbed by an expansive operator. Our approach is applied to prove the existence of non trivial positive solutions for initial value problems (IVPs for short) covering a class two-dimensional nonlinear wave equations.

Mathematics subject classification (2020): 47H10, 47H08, 35L15.

Keywords and phrases: Fixed point index, cone, sum of operators, Green function, PDEs.

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