

NATURAL DECOMPOSITION METHOD FOR SOLVING KLEIN GORDON EQUATIONS

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ABSTRACT

In this research paper, the Natural Decomposition Method (NDM) is implemented for solving the linear and nonlinear Klein Gordon equations.

The method which is based on the Natural Transform Method (NTM) and the Adomian Decomposition Method (ADM) is use to obtain exact solutions of three modelling problems from Mathematical Physics.

The results obtained are in agreement with existing solutions obtained by other methods and demonstrate the simplicity and efficiency of the NDM.

KEYWORDS: Adomian Decomposition Method, Klein Gordon Equations, Natural Transform, Sumudu Transform, Laplace Transform