BLOW UP IN FINITE TIME OF SOLUTIONS FOR A COUPLED KLEIN-GORDON EQUATIONS WITH NONLINEAR DAMPING TERM
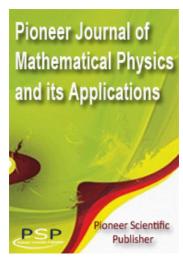
Shang Longqi and Yu Tao

Abstract

In this paper, we consider the Cauchy problem for a class of coupled Klein-Gordon equations with nonlinear damped term at low initial energy level. By using Sobolev inequality and potential wells and introducing a new unstable set, we derive the result that certain solutions with sub-critical initial energy blow up in finite time.