

## **Strong instability for standing wave solutions to the system of the quadratic NLKG**

HAYATO MIYAZAKI

National Institute of Technology, Tsuyama College,  
624-1 Numa, 708-0824 Tsuyama, Okayama, JAPAN  
miyazaki@tsuyama.kosen-ac.jp

We consider the instability for standing wave solutions to the system of the quadratic nonlinear Klein-Gordon equations. In the single case, namely the nonlinear Klein-Gordon equation with power type nonlinearity, stability and instability for standing wave solutions have been extensively studied. On the other hand, in the case of our system, there would be no result concerning the stability and instability for the standing wave as far as we know. In this talk, we give a strong instability result for the standing wave to our system. The proof is based on the techniques in Ohta and Todorova (2007). New ingredient is to need the mass resonance condition in two or three space dimensions whose cases are the mass sub-critical case.