

1062-39-46

Alexander Pankov* (Alexander.Pankov@morgan.edu), Mathematics Department, Morgan State University, Baltimore, MD 21251. *Solitary waves in Fermi-Pasta-Ulam lattices with saturable nonlinearities.*

We consider FPU lattices with saturable nonlinearities. For every wave speed in a natural range, we obtain the existence of traveling solitary waves. In addition, we discuss what happens outside the allowed wave speed interval and study the behaviour of the amplitude of the wave when the wave speed approaches the upper end point of the allowed interval. (Received July 17, 2010)