Workshop on Singularities, Hamiltonian and gradient flows Atelier sur les singularités, flots hamiltoniens et gradients 12–16 May/Mai, 2008

Counterpropagating Two-soliton Solutions for the Fermi-Pasta-Ulam Model

Clarence Eugene WAYNE
Department of Mathematics and Statistics
Boston University
111 Cummington St.
Boston, MA 02215
USA

cew@math.bu.edu

Abstract

We establish the existence of solutions of the Fermi-Pasta-Ulam model which exist for all time and which converge for time t going to both $\pm infinity$ to a pair of counterpropagating solitary waves, plus a small error.

This is joint work with Aaron Hoffman.