
DANIEL KRAUS, Brock University

Hamiltonian structure of multi-peakon sector of the FORQ (modified CH) equation

There has been much recent interest in the FORQ (modified CH) equation as an integrable system with multi-peakon solutions. However, unlike all of the other known integrable multi-peakon equations — Camassa-Holm, Degasperis-Procesi, Novikov — no Hamiltonian structure has yet been found for its multi-peakon sector.

In this talk, we explain the basic obstacle and derive a Hamiltonian structure for multi-peakon solutions but at the cost of working in a distributional setting which differs from the standard weak formulation of the equation.