Solutions of integrable two dimensional generalisation of the Volterra system

Alexander Mikhailov
Department of Applied Mathematics
University of Leeds
Leeds LS2 9JT
UNITED KINGDOM

A.V.Mikhailov@gmail.com

Abstract

We study solutions and properties of a two dimensional generalisation of the Volterra system. We have found exact solutions, corresponding nonlinear wave fronts and cascades of soliton decays. A classification of solutions obtained can be done in terms of Schubert cells of real and complex Grassmanians.