

1143-35-322

Barbara Prinari* (bprinari@uccs.edu), Department of Mathematics, 1420 Austin Bluffs Pkwy, University of Colorado Colorado Springs, Colorado Springs, CO 80918. *Inverse scattering transform and soliton solutions for certain matrix nonlinear Schrödinger equations.*

We will discuss the Inverse Scattering Transform (IST) for two novel reductions of the matrix nonlinear Schrödinger equation which are integrable, and which are the analog of the modified Manakov system with mixed signs of the nonlinear coefficients, i.e., a nonlinearity in the norm which is of Minkowski type, instead of Euclidean type. We will also classify one soliton solutions, discuss regularity conditions and investigate special bound states and two soliton solutions. (Received August 17, 2018)