

UCCS Mathematics

Colloquium

Monday, February 28th, 2011

UC 307

12:30 pm – 1:30 pm

(Refreshments at 12:15 pm)

Dr. Sandra Carillo, University of Rome Sapienza

Baecklund transformations, Recursion Techniques and Noncommutative soliton solutions

Abstract: Results on Baecklund Transformations are combined with an operator approach to nonlinear evolution equations is presented. Specifically, results recently obtained in a joint research project with Cornelia Schiebold, Mid Sweden University, allow to construct general solution formulae in the case of the KdV and mKdV hierarchies. They are derived by means of Banach space techniques both in the scalar and matrix case. Notably, these results are based on previous ones concerning hierarchies of nonlinear evolution equations and their links via Baecklund Transformations.

Transformations.

