

University of Notre Dame Department of Mathematics

GRADUATE STUDENT SEMINAR

Curtis Holliman

University of Notre Dame

Will give a lecture entitled:

Solitons

On

Monday, February 7, 2011

At

4:15 PM

In

229 Hayes-Healy Hall

Abstract

Solitons, or self-reinforcing solitary waves, arise in the theory of partial differential equations and dynamical systems including several well-known instances such as in fiber optics, magnets, and DNA. We will begin with a basic introduction to the theory of such waves and more generalized traveling waves and conclude by presenting an application of this theory to new results regarding the Degasperis-Procesi equation.