

University of Notre Dame Department of Mathematics
MATHEMATICAL RESEARCH AT NOTRE DAME

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Will give a lecture entitled:

Evolution equations with traveling wave solutions

On

Friday, November 30, 2012

At

4:00 PM

In

231 Hayes-Healy Hall

Abstract

Focusing on the Korteweg-de Vries (KdV) equation and the Camassa-Holm (CH) equation we shall present a few ideas and techniques for solving partial differential equations. KdV was derived in 1895 as a model of long water waves propagating in a channel. Since then it has reappeared in many other areas of mathematics and its applications and it has been a favorite subject of study by mathematicians of all kinds. It possesses traveling wave solutions (solitons) having many interesting properties. However they never break! The search for a water wave equation having traveling wave solutions that break led to the discovery of the CH equation.