Florida Gulf Coast University
Department of Mathematics

MATHEMATICS SEMINAR

Friday, October 18, 2019
2:45-3:35 pm

Seidler Hall
Room 220

A Historical Perspective Involving Both Experimental and Mathematical Evidence For The Existence of Solitary Waves And Solitons

Guest Speaker: Dr. Canan UNLU
University of Istanbul

The nonlinear evolution equations (NLEEs) are broadly used to formulate mathematical model of nonlinear wave phenomena appearing in the field of science and engineering. When we want to understand the physical mechanism of phenomena in nature which are described by nonlinear evolution equations, exact solutions for the NLEEs have to be explored. In order to better understand the inner infrastructure of the phenomena described by the NLEEs, solitary wave solutions play an imperative role. Solitons are special kinds of solitary waves.
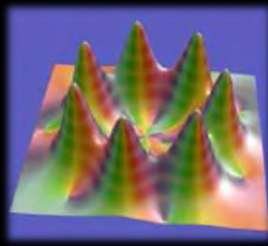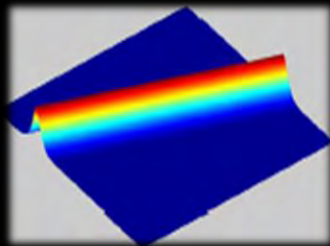
We give a brief introduction to a certain class of nonlinear partial differential equations known as solitons or stable solitary wave solutions. We introduce necessary background by considering general solutions of the classical wave equation and some of its variants, focusing on features of linearity, non-lineartiy, dissipation and dispersion.

LIGHT REFRESHMENTS WILL BE PROVIDED

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