Colloquium Series
On a reverse space-time nonlocal Sasa-Satsuma equation

Dr. Zuo-nong Zhu
School of Mathematical Sciences
Shanghai JiaoTong University,China

Abstract

The Sasa-Satsuma equation is an integrable high-order nonlinear Schr¨odinger (NLS) equation, and also can be viewed as a complex modified KdV-type equation. It can describe the propagation of femtosecond pulses in optical fibers. Very recently, Ablowitz and Mussliman introduced a class of reverse space, reverse time, and reverse space-time nonlinear nonlocal integrable equations, including the reverse space nonlocal NLS equation, the real and complex reverse spacetime nonlocal mKdV, sine-Gordon, Davey-Stewartson equations, et.al. So, what is nonlocal version of high-order NLS? In this talk, we introduce a reverse spacetime nonlocal Sasa-Satsuma equation, and derive its solutions with the Darboux transformation method. Periodic solutions, and some localized solutions, such as dark soliton, W-shaped soliton, M-shaped soliton and breather soliton of the reverse space-time nonlocal Sasa-Satsuma equation are constructed. This is a joint work with Dr. Caiqin Song, and Prof. Dongmei Xiao.
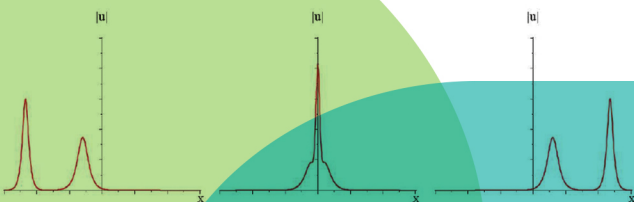
Date: Friday, December 1, 2017
Time: 12:45pm–1:30pm
Place: EMAGC 1.302

The talk will be delivered live at the Edinburg campus and will be streamed to the Brownsville campus at BSABH 1.108. Refreshments will be served at 11:45am.
For further information or for special accommodations, please contact Dr. BaoFeng Feng at 665-2269 or via email at baofeng.feng@utrgv.edu.

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