1120-35-310 **Stephen C Anco***, Dept. of Mathematics & Statistics, Brock University, St Catharines, ON , Canada. *Oscillatory solitons of Hirota and Sasa-Satsuma equations.*

The Hirota equation and the Sasa-Satsuma equation are U(1)-invariant integrable generalizations of the modified Korteweg-de Vries equation. In addition to ordinary solitons, these two equations possess oscillatory solitons, which describe harmonically modulated complex solitary waves. In this talk, I will discuss some interesting features of oscillatory solitons and their nonlinear interactions. In particular, unlike ordinary solitons which are uni-directional, the speed of oscillatory solitons can be positive, negative, or zero, depending on their harmonic modulation frequency. This motivates introducing a physical parameterization defined in terms of the speed, modulation frequency, and phase of the soliton. (Received February 23, 2016)