

*Drexel University Partial Differential Equations
and Applied Mathematics Seminar*

PRESENTS:

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The stability of the finite-genus solutions of the KdV equation

Abstract: The KdV equation is known to have large families of (quasi)periodic solutions that are parameterized by hyperelliptic Riemann surfaces. They are generalizations of the famous soliton solutions. In this talk, we show that all such periodic solutions are orbitally stable with respect to so-called sub-harmonic perturbations: perturbations that are periodic with period equal to an integer multiple of the period of the underlying solution. To achieve this we combine ideas from integrable systems theory with classical PDE and dynamical systems results. This is joint work with Michael Nivala.

Monday, November 16, 2:00PM. Korman Center, Room 245. Drexel University. Philadelphia, PA 19104.

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