

*Department of Mathematics and Statistics
Colloquium Lecture Series*

*Tuncay Aktosun
University of Texas at Arlington*

**Exact Solutions to the Nonlinear Schrödinger
Equation**

A method is given to construct globally analytic (in space and time) exact solutions to the focusing cubic nonlinear Schrödinger equation on the line. An explicit formula and its equivalents are presented to express such exact solutions in a compact form in terms of matrix exponentials. Such exact solutions can alternatively be written explicitly as algebraic combinations of exponential, trigonometric, and polynomial functions of the spatial and temporal coordinates.

*Thursday, September 6, 2007
Chapman 104
3:45 – 4:45 pm*

Refreshments after the talk in Chapman 101A