

1143-35-471

Robert Jenkins*, bobjen@rams.colostate.edu, and **Jiaqi Liu, Peter Perry** and **Catherine Sulem**. *Soliton Resolution for the Derivative Nonlinear Schrödinger Equation (Part II)*.

This talk concerns joint work with Jiaqi Liu, Peter Perry, and Catherine Sulem on the soliton resolution conjecture for the Derivative Nonlinear Schrodinger Equation (DNLS), a completely integrable dispersive nonlinear equation in one space and one time dimension. This is the second of two talks to be given in sequence by Peter Perry and Robert Jenkins. The relevant papers will appear in *Communications in PDE* and *Communications in Mathematical Physics*.

In the first talk, Peter Perry will discuss the complete integrability of the DNLS and the analysis of direct and inverse scattering maps in the presence of finitely many solitons. In this talk we will describe the steepest descent analysis of the Riemann-Hilbert problem that defines the inverse scattering map in the large-time asymptotics regime. The result of this analysis is a soliton resolution result for generic solutions of DNLS.

In a related talk, Jiaqi Liu will describe more recent work on global well-posedness for DNLS with arbitrary spectral singularities. (Received August 20, 2018)