1003-35-811 **Peter D Miller*** (`millerpd@umich.edu`), Department of Mathematics, University of Michigan, 525 E. University Avenue, Ann Arbor, MI 48109. *Soliton Ensembles and Semiclassical Asymptotics.*

This talk will review prior and recent work in the analysis of the N-soliton, the solution of the focusing nonlinear Schrödinger (NLS) equation with initial data $N\mathrm{sech}(x)$, in the limit of large N. This object may be regarded as a "soliton ensemble", and its asymptotics may be obtained rigorously via the connection to a semiclassical scaling of the NLS equation, and recently developed techniques of asymptotic analysis for the corresponding Riemann-Hilbert problem of inverse scattering. The ongoing work described in this talk is joint with Greg Lyng of the University of Michigan. (Received September 29, 2004)