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Ruguang Zhou* (rgzhou@public.xz.js.cn), Department of Mathematics, Xuzhou Normal University, Xuzhou, Jiangsu 221116, Peoples Rep of China. *Nonlinearization of spectral problem with reality condition.*

The nonlinearization of spectral problem is a powerful approach to decompose a (1+1) dimensional soliton equation into a pair of finite dimensional integrable Hamiltonian system. In this talk, we show how to extend this approach and apply to spectral problems with reality condition. The integrable decompositions of the nonlinear Schroedinger equation, the real-valued mKdV equation and the derivative nonlinear Schroedinger equation are obtained. (Received September 01, 2006)