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Gino Biondini* (biondini@buffalo.edu), Buffalo, NY 14260. *Nonlinear Schrodinger systems with non-zero boundary conditions.*

Despite having been intensely investigated over the last forty years, nonlinear Schrodinger (NLS) systems still offer some surprises. This talk will discuss recent results on the initial-value problem (IVP) for both focusing and defocusing, scalar and vector, NLS systems with non-zero boundary conditions at infinity. The solution of the IVP for these systems via the inverse scattering transform will be outlined, various explicit soliton solutions will be presented, and spectral problems for some specific classes of initial conditions will be discussed. (Received September 17, 2013)