Scalar and vector nonlinear Schrödinger systems with non-zero boundary conditions

G. Biondini
Department of Mathematics, State University of New York at Buffalo, USA
biondini@buffalo.edu

Despite having been intensely investigated over the last forty years, nonlinear Schrödinger (NLS) systems still offer many surprises. In this talk we discuss recent results on both focusing and defocusing, both scalar and vector, NLS equations with non-zero boundary conditions at infinity. A number of explicit soliton solutions will be discussed, as well as spectral problems for special classes of initial conditions.