

Read-Green resonances in an integrable superconductor coupled to a bath

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We study a topological superconductor capable of exchanging particles with an environment. This additional interaction breaks several symmetries of the isolated model and can be modelled by means of an integrable Hamiltonian, building on the class of Richardson-Gaudin pairing models. We present the exact Bethe ansatz wave function and show how the related Bethe ansatz equations may be efficiently solved. From this exact solution, it can be shown that the topological phase transition disappears, but can still be observed through Read-Green resonances in low-energy and -momentum level occupations.