Séminaire de physique mathématique

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Orme des Merisiers Salle Claude Itzykson, Bât. 774

From quantum integrability to classical one and back: taming classicalness of XXZ spin chain

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I will discuss about the recent work on the classical limit of anisotropic spin-half XXZ chain. From asymptotic Bethe ansatz technique in XXZ spin chain, the Bethe equation can be formulated as a Riemann-Hilbert problem, hinting a connection to finite-gap solution of classical Landau-Lifshitz field theory. By solving the classical corresponding problem, and using the functional technique developed by Kostov, Gromov et al, an exact quantum-classical correspondence of the solution to quantum integrable chain and classical integrable field theory is implied.