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Talk: Perturbative expansion of energy densities in integrable models: the full analytic trans-series

Saturday 4 February 2023 18:20 (55 minutes)

In this talk I will consider the energy density of integrable scattering theories, which can be calculated using a linear integral TBA equation. These include the Gaudin-Yang and Lieb-Liniger models as well as integrable quantum field theories in which a conserved charge is coupled to an external field. I will explain how these TBA equations can be expanded perturbatively and investigate the asymptotic properties of the perturbative coefficients. The asymptotical behaviour reveals non-perturbative corrections. I will construct the full trans-series, which contains all non-perturbative corrections together with their own perturbative expansions.

Presenter: Prof. BAJNOK, Zoltan (Wigner institute)