Simon Ekhammar (Friday 23rd)

--Title--

Bootstrapping Quantum Spectral Curves

--Abstract--

The AdS/CFT Quantum Spectral Curve (QSC) is an integrability-based set of Riemann-Hilbert equations discovered in the study of planar N=4 SYM. Both analytic and numerical methods were developed using the QSC essentially fully solving the spectral problem in this gauge theory.

We propose a method dubbed Monodromy Bootstrap to engineer QSC´s beyond the realm of N=4 SYM. QSC is based on a Q-system whose trademark feature, as opposed to other integrable models, is the presence of branch-points. Monodromy Bootstrap reconciles this feature with non-local functional equations of the Q-system.

Out of the new QSC's constructed, one example describes Hubbard model, another is conjectured to describe the  quantum spectrum of string sigma model on AdS3xS3xT4 with pure RR flux. We shall discuss this model in some detail and offer its first solutions.