

Quantum integrable systems, conformal field theories and stochastic processes



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Type: **Non spécifié**

Topological expansions in random matrix theory

We will discuss how to obtain topological expansions from Dyson-Schwinger equations in both random matrix and tiling models. We will start by discussing the case of the GUE and show how Dyson-Schwinger equations are equivalent to the expansion of cumulants as generating functions for the enumeration of maps. We will then extend these ideas to beta-ensemble, and their consequences to derive central limit theorems. We finally will use equations introduced by Nekrasov to obtain similar results for random tilings.

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