

# Conformal field theory 3 ways: integrable, probabilistic, and supersymmetric



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## Probabilistic approach of Liouville theory

*Tuesday 23 January 2024 18:15 (1 hour)*

In these lectures, we will review the probabilistic construction of Liouville CFT. We will explain the Segal axioms for CFTs and how they can be implemented in Liouville CFT with the construction of amplitudes. Gluing amplitudes then allows us to identify the Hamiltonian of the Liouville CFT and to provide a representation of the Virasoro algebra in the Hilbert space of Liouville theory. We will explain the diagonalization of the Hamiltonian using the Virasoro representation. Finally we will explain how to combine these concepts to establish the validity of the conformal bootstrap.

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