

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



Contribution ID: 24

Type: **not specified**

A probabilistic approach to Toda Conformal Field Theories

Friday 26 January 2024 10:30 (30 minutes)

Toda Conformal Field Theories form a family of two-dimensional quantum field theories generalizing Liouville theory. One of their features is that they enjoy, in addition to conformal invariance, an enhanced level of symmetry encoded by W -algebras.

In this talk we describe their mathematical definition and study some of their properties. Namely we will explain how the understanding of its symmetries allows to provide a probabilistic derivation of the Fateev-Litvinov formula for a family of structure constants of the theory. Along with the proof we will shed light on some unexpected connections between a reflection principle in Toda CFTs and its probabilistic counterpart.

Presenter: CERCLE, Baptiste (EPFL)