



北京理工大学

数学与统计学院学术报告

Towards solvability of Toda Conformal Field Theories

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摘要: Toda Conformal Field Theories (CFTs) form a family of two-dimensional CFTs that generalize the celebrated Liouville theory. One of the defining features of Toda CFTs is that they enjoy, in addition to conformal invariance, an enhanced level of symmetry encoded by W -algebras. Besides they can be rigorously defined within a probabilistic framework that involves (vectorial) Gaussian Free Fields and Gaussian Multiplicative Chaos.

During this talk I will review some recent progress and current works related to solvability of these models. As we will see a key point is the translation of results coming from representation theory of W -algebras into actual statements for Toda correlation functions, which in turn provides a systematic method to address the Mukhin-Varchenko conjecture for Selberg-type integrals. This is based on a series of work with Nathan Huguenin.

报告人简介: Baptiste Cerclé is a post-doctoral researcher at Ecole Polytechnique Fédérale de Lausanne, working in the group of Juhan Aru. He graduated from Université Paris-Saclay in 2023 where he completed a PhD conducted under the supervision of Colin Guillarmou and Vincent Vargas. Starting from 2026 he will be a CNRS researcher.