Mathematical Physics
Faculty of Physics
Boltzmanngasse 5
1090 Vienna, Austria

universität wien

I N V I T A T I O N

as part of the Mathematical Physics Theory Seminar

to the talk by

Babak HAGHIGHAT

(Tsinghua University, BIMSA)

on

"Foams and KZ-equations in Rozansky-Witten theories"

Abstract:

In this talk, we present a geometric description of foams, which are prevalent in topological quantum field theories (TQFTs) based on quantum algebra, and reciprocally explore the geometry of Rozansky-Witten (RW) theory from an algebraic perspective. This approach illuminates various aspects of decorated TQFTs via geometry of the target space X of RW theory. Through the formulation of the Knizhnik-Zamolodchikov (KZ) equation within this geometric framework, we derive the corresponding braiding and associator morphisms. We discuss applications where the target space of RW theory emerges as the Coulomb branch of a compactified 6d SCFT or Little String Theory, with the latter being particularly intriguing as it results in a compact X.

Time: Tuesday, 21 January 2025, 2:00 p.m.

Location: Erwin-Schrödinger Lecture Hall, 1090 Vienna, Boltzmanngasse 5, 5th floor

sgd. S. Fredenhagen, M. Sperling