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Impact of SUSY on the dynamical emergence of the spacetime in the type IIB matrix model with the Lorentz symmetry "gauge fixed"

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The type IIB matrix model has been proposed as a non-perturbative formulation of string theory. Its partition function is divergent due to the non-compactness of the Lorentz group. This has led to a new definition of the type IIB matrix model with the Lorentz symmetry fixed by the Faddeev-Popov procedure in a non-perturbative manner. We study this model using the complex Langevin method, and discuss the impact of supersymmetry on the dynamical generation of the (3+1)-dimensional spacetime.

Parallel Session (for talks only)

Theoretical developments and applications beyond Standard Model

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