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The effect of fermions on the emergence of (3 +1)-dimensional expanding space-time in the Lorentzian type IIB matrix model

Wednesday, 29 November 2023 14:15 (15 minutes)

The Lorentzian type IIB matrix model is a promising candidate for a non-perturbative formulation of superstring theory. Recently, we have performed complex Langevin simulations adding a Lorentz invariant mass term as an IR regulator. In this talk, we will show that the (3+1)-dimensional expanding space-time emerges due to the effect of fermions.

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