Contribution ID: **55** Type: **Short talk at the venue**

Complex Langevin studies of the emergent space-time in the type IIB matrix model

Thursday, 25 November 2021 16:00 (15 minutes)

We perform numerical studies of the type IIB matrix model, which was proposed as a nonperturbative formulation of superstring theory in 1996. The complex Langevin method is used in order to overcome the sign problem, which occurs in applying Monte Carlo methods. In particular, we investigate how the signature of the space-time is determined dynamically in this model, and discuss the possibility of the emergence of the (3+1)D expanding universe.

Presenter: HATAKEYAMA, Kohta (KEK)

Session Classification: Short talks