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Deep Learning Inverse Problems in Extreme QCD Matter Study

Monday, 26 June 2023 16:00 (25 minutes)

In this talk we introduce how deep learning helps in solving inverse problems in the scope of extreme QCD matter study. The study of QCD matter under extreme conditions presents numerous challenging inverse problems, where the forward problem is straightforward but the inversion is not, such as in-medium interaction retrieval, spectral function reconstruction, nuclear matter equation of state inference, etc. Deep Learning methods have been explored in these problems, with several different strategies including data-driven supervised learning and physics-driven unsupervised learning approaches. We will talk about these recent trials with also summary from the methodology point of view.

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