



Contribution ID: 265

Type: **Parallel Talk**

Trivializing Flow in 2D-O(3) model

Thursday, 3 August 2023 13:50 (20 minutes)

The 2D O(3) model has been widely used as a toy model for quantum chromodynamics and ferromagnetism. It shares fundamental features with quantum chromodynamics, such as being asymptotically free. It is possible to define a trivializing map, a field transformation from a given theory to trivial variables, through a gradient flow. An analytic solution to this trivializing flow may be obtained by a perturbative expansion in the flow parameter. Utilizing this solution allows for new approaches to be considered when proposing updates for a Markov Chain algorithm.

Topical area

Algorithms and Artificial Intelligence

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Session Classification: Algorithms and Artificial Intelligence