

NEURAL TRANSFORMATIONS FOR EFFICIENT TOPOLOGICAL MIXING

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ABSTRACT

We propose a generalized version of the L2HMC algorithm (Lévy et al., 2018), and evaluate its ability to sample from different topologies in a two-dimensional lattice gauge theory. In particular, we demonstrate that our model is able to successfully mix between modes of different topology, significantly reducing the computational cost required to generate independent gauge configurations.

1 INTRODUCTION

Hamiltonian Monte Carlo

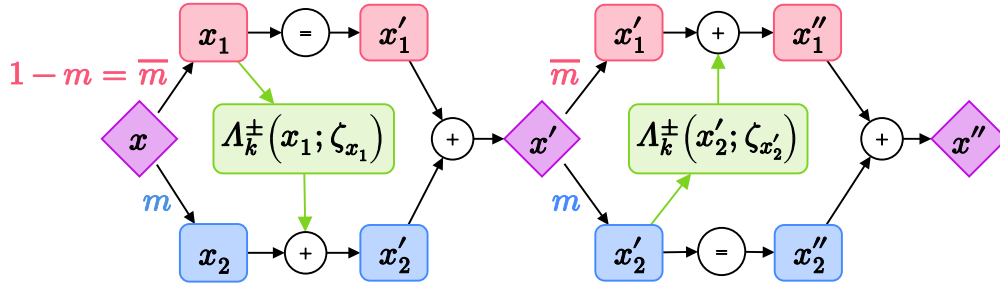


Figure 1: Illustration of the split x update.

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REFERENCES

Daniel Lévy, M. Hoffman, and Jascha Sohl-Dickstein. Generalizing hamiltonian monte carlo with neural networks. *ArXiv*, abs/1711.09268, 2018.

A APPENDIX

You may include other additional sections here.