

Contribution ID: 4

Type: **not specified**

Stochastic Normalizing Flows for lattice gauge theory and defects

In recent years, flow-based samplers have emerged as a promising alternative to traditional sampling methods in lattice field theory. In this talk, I will introduce a class of flow-based samplers known as Stochastic Normalizing Flows (SNFs), which combine neural networks with non-equilibrium Monte Carlo algorithms. I will then show that SNFs exhibit excellent scaling with volume in lattice $SU(3)$ gauge theory. Afterward, I will focus on gauge theories with defects and outline a general strategy for applying flow-based samplers to these systems. In particular, I will present an application to $SU(3)$ gauge theory with open boundary conditions, broadening the scope of modern sampling techniques.

Author: CELLINI, Elia (University of Turin/ INFN Turin)

Presenter: CELLINI, Elia (University of Turin/ INFN Turin)