Contribution ID: **40** Type: **Talk**

【11】Neural Network Quantum States

Thursday, 2 September 2021 11:30 (30 minutes)

Neural-Network quantum states (NQS) have been recently proposed as a method to solve challenging interacting quantum problems. During this talk, I will discuss the application of NQS to a variety of problems. First, we consider how NQS can be used to obtain excited states as well ground states within a symmetry sector. Next, building on the tools developed, we apply the NQS approach to frustrated J1-J2 model on the square lattice. Here, we show that deep convolutional NQS can achieve results that are competitive with other state of the art variational methods developed in the past decade. Finally, we present results on the use of NQS for quantum chemistry.

Primary author: CHOO, Kenny (University of Zurich)

Presenter: CHOO, Kenny (University of Zurich)

Session Classification: Plenary Session

Track Classification: Condensed Matter Physics (KOND)