Contribution ID: **21**   Type: **not specified**

Quantum simulation of parton physics

Thursday, 12 December 2019 12:30 (30 minutes)

Real-time correlators are difficult to evaluate on a classical computer due to the sign problem. Simulations performed on a quantum computer naturally give real-time correlators. From these real-time correlators, both parton distribution functions and the hadronic tensor may be obtained. In this talk, I describe three ingredients for the evaluation of the hadronic tensor on a quantum computer - the preparation of a proton state, representation and simulation of SU(3) gauge theory, and evaluation of real-time correlators.

Primary authors: YAMAUCHI, Yukari (University of Maryland); Dr LAMM, Henry (University of Maryland); Dr LAWRENCE, Scott (University of Maryland)

Presenter: YAMAUCHI, Yukari (University of Maryland)

Session Classification: Session 6