

Shao Ding Yu – HEP Seminar – 10/8/2019
UCLA

Title: "Resummation, Parton shower and Effective field theory"

Abstract: In this talk, I will briefly review QCD resummation within the effective field theory framework. Then I will introduce the framework about factorization and resummation for jet observables at high energy colliders. In arXiv:1508.06645, we construct a new effective field theory which fully factorizes non-inclusive(-global) jet observables. Starting from the factorization theorem, we derive a parton-shower equation for the resummation of large logs. Recently, with my collaborators, we study the TMD resummation for jet production at the LHC. We derived an all-order factorization formula, which allows for the systematic resummation of all large logarithms, including small-R and non-global logarithms. The corresponding references include arXiv: 1905.01335, 1901.09038, 1605.02737.