DEPARTMENT OF **PHYSICS**

High Energy Physics Seminar

Friday, January 19, 2018 @ 3:00 PM
Room M2035
Physics Research Building

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Hosted by Prof. Eric Braaten

*Transverse Momentum Observables
for Drell-Yan Processes*

Precise prediction for QCD jet production is one of important topics in colliders phenomenology to better understand the standard model and to accurately estimate background in new physics search. One of simplest jet process, 0-jet production, is the Drell-Yan hence most accurate prediction is available. In this talk, I will discuss my recent progress in understanding of transverse momentum dependent observables in this process by using a theory tool called the Soft-Collinear Effective Theory (SCET) that allows us to factorize the cross section and to better control over accuracy of the theory prediction by resumming large logarithm in small pT region. I will discuss fast and accurate method for the resummation, which allows us to analytically express the final cross section in terms of series sum of Hermite polynomials.

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