Contribution ID: **1024** Type: **Parallel Session Talk**

Transverse momentum dependent splitting functions and parton distributions.

Thursday 22 July 2010 11:35 (13 minutes)

This talk gives an introduction to transverse momentum dependent (unintegrated) parton distributions and presents the results of a recent study of quark splitting functions defined at fixed longitudinal and transverse momenta. We discuss the treatment of endpoint divergences, emphasizing the physical picture that underlies the need for infrared subtraction factors in the operator matrix elements that appear in the factorization formulas. We present results of a recent calculation for gluon-to-quark splitting kernel at fixed transverse momentum, and show that this kernel naturally emerges from renormalization of ultraviolet divergences in the operator matrix elements. We discuss prospects for phenomenological applications of the unintegrated formulation of QCD factorization.

Primary author: HAUTMANN, Francesco (Institute of Theoretical Physics)

Presenter: HAUTMANN, Francesco (Institute of Theoretical Physics)

Session Classification: 04 - Hadronic Structure, Parton Distributions, soft QCD, Spectroscopy

Track Classification: 04 - Hadronic Structure, Parton Distributions, soft QCD, Spectroscopy