Contribution ID: **31**                                                          Type: **not specified**

# Toward a universal definition of TMD Fragmentation Functions

*Tuesday, 26 January 2021 12:35 (15 minutes)*

In semi-inclusive deep-inelastic scattering (SIDIS), the observables can be written in terms of two contributions: nucleon structure (i.e. the way partons are arranged in nucleons, encoded in the Transverse-Momentum Dependent Parton Distributions - TMD PDFs) and the mechanism of hadronization (encoded in the TMD Fragmentation Functions - TMD FFs). A reliable extraction of the former requires a detailed knowledge of the latter. In this regard, one of the cleanest processes from which we can gather information about TMD FFs is single hadron production in $e^+e^-$ annihilation, with the jet axis being reconstructed. Unfortunately, the usual TMD factorization cannot be directly applied to this process. We present a factorization scheme that allows to write a proper factorization theorem for such cross section, restoring the possibility to perform global phenomenological studies of TMD physics by providing a framework in which SIDIS and $e^+e^-$ data can be combined together.

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**Session Classification:**   Hadron tomography at EIC and HEP

**Track Classification:**   Hadron tomography