

# XXIV International Workshop on Deep-Inelastic Scattering and Related Subjects (DIS16)



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## Extracting Spin Dependent Parton Distributions from Deeply Virtual Scattering Processes

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Spin and transverse momentum dependent parton distributions - GPDs, TMDs and GTMDs - are at the interface between the non-perturbative regime of QCD hadron structure and observable quantities. The distributions appear as linear superpositions and convolutions within helicity amplitudes for parton-nucleon scattering processes, which, in turn, occur in amplitudes for lepton production processes. The phenomenological extraction of the amplitudes, and hence the distributions, is a challenging task. We will present relations between crucial quark-nucleon or gluon-nucleon helicity amplitudes and the rich array of angular distributions in Deeply Virtual Compton Scattering, Time-like Compton Scattering and novel Multi-hadron photon processes. These provide an important window into the spin structure of the nucleons.

**Primary author:** Prof. GOLDSTEIN, Gary (Tufts University)

**Co-author:** Prof. LIUTI, Simonetta (University of Virginia)

**Presenter:** Prof. GOLDSTEIN, Gary (Tufts University)

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