

Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Nucleon PDFs and TMDs from Continuum QCD¹ KYLE BEDNAR, Kent State Univ - Kent, IAN CLOET, Argonne National Laboratory, PETER TANDY, Kent State Univ - Kent — The parton structure of the nucleon is investigated in an approach based upon QCD's Dyson-Schwinger equations. The method accommodates a variety of QCD's dynamical outcomes including: the running mass of quark propagators and formation of non-pointlike di-quark correlations. All needed elements, including the nucleon wave function solution from a Poincaré covariant Faddeev equation, are encoded in spectral-type representations in the Nakanishi style to facilitate Feynman integral procedures and allow insight into key underlying mechanisms. Results will be presented for spin-independent PDFs and TMDs arising from a truncation to allow only scalar di-quark correlations. The influence of axial-vector di-quark correlations may be discussed if results are available.

¹Supported by NSF grant No. PHY-1516138

Peter Tandy
Kent State Univ - Kent

Date submitted: 30 Jun 2017

Electronic form version 1.4