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Nucleon structure in the covariant parton model[1] SAMAN BASTAMI, Department of Physics, University of Connecticut, ANATOLI VASILIEVICH EFREMOV, Bogoliubov Laboratory of Theoretical Physics, JINR, PETER SCHWEITZER, Department of Physics, University of Connecticut, OLEG TERYAEV, Bogoliubov Laboratory of Theoretical Physics, JINR, PETR ZAVADA, Institute of Physics of the Czech Academy of Sciences — I will present a generalization of the covariant parton model that describes the quark correlators in a systematic way. This new version of the model allows for the first time to evaluate all T-even twist-3 transverse momentum dependent parton distribution functions (TMDs), and reproduces the T-even leading-twist TMDs from the original version. The fully unintegrated quark correlator is also evaluated in this approach, which allows us to understand the model-specific relations between different TMDs. The consistency of the approach is discussed and numerical results with comparisons to available TMD parametrizations are provided.

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Saman Bastami
University of Connecticut

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