

# XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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## Gluon TMDs and $J/\psi$ polarization at the EIC

*Thursday, 15 April 2021 12:58 (18 minutes)*

We study the polarization of  $J/\psi$  mesons produced in semi-inclusive, deep-inelastic electron-proton scattering in different reference frames at the EIC energies. At low transverse momentum, we propose factorized expressions in terms of transverse momentum dependent gluon distributions and shape functions. In particular, we show that the distribution of linearly polarized gluons can, in principle, affect the polarization of the produced quarkonium states. We also demonstrate that our formulae, at the order  $\alpha_s$ , correctly match with the collinear factorization results at high transverse momentum.

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