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The four-gluon vertex in collinear and soft kinematics

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In this talk we present recent results on the transversely-projected four-gluon vertex in two families of kinematic configurations: i) ''collinear'' where all external momenta are parallel to each other and ii) ''soft'' with one vanishing and three arbitrary external momenta. The approach is based on the one-loop dressed Schwinger-Dyson equation obtained from the 4PI effective action. The key hypothesis employed in both cases is the property of planar degeneracy of the vertex, simplifying significantly the technical aspects of the underlying equations. The results obtained reveal a considerable suppression with respect to the corresponding tree-level value, and, for the soft configurations, they are in excellent agreement with recent lattice simulations.

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