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Physics of Transverse Spin

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In this talk, I present a theoretical overview on the novel features of the transverse spin phenomena in hard scatterings, in particular, single spin asymmetries (SSA). The large SSAs observed in pp collisions and semi-inclusive DIS reflects the chiral-symmetry breaking in QCD, and its understanding requires extension of the framework for hard processes: It requires formulating new concepts, such as intrinsic transverse momentum of quarks (“T-odd” distribution and fragmentation functions), quark-gluon correlation in a hadron (twist-3 effects) and the transverse extension of hadrons (impact-parameter dependent parton distribution) etc. I discuss recent developments in our understanding on SSA in terms of these novel effects.