The Parton Branching method: new precision level in collider predictions

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One of the uncertainty sources in obtaining predictions for collider measurements comes from the assumption that partons are collinear with the hadron they build. For certain observables also the parton's transverse momentum needs to be taken into account. I present the Parton Branching (PB) method to describe transverse momentum dependent parton distribution functions (TMDs), which are the basis for precise predictions. I explain the PB method, concentrating on angular ordering of soft gluons. I point out the strength of the PB method by comparing to other approaches and applying it to the Z boson pt.