

# QCD@LHC2022

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## Two-loop mixed QCD-electroweak amplitudes for Z+jet production

*Friday 2 December 2022 09:40 (15 minutes)*

In this talk, I will present a calculation of the two-loop mixed QCD-electroweak amplitudes for Z+jet production in proton colliders. I will argue that employing a recently proposed projector method reduces the amount of independent Lorentz tensor structures, even for anomalous contributions. I will discuss the numerical evaluation of multi-scale Feynman integrals with the Auxiliary Mass Flow method. Finally, I will mention potential applications to Dark Matter searches at the LHC.

### Declaration

I certify that I have checked that I am authorised to submit the abstract with the listed co-authors with their current affiliations

### Change of Speaker

I understand that change of speaker is allowed provided that no participant gives more than one talk. Otherwise, we will ask the speaker to choose between one or the other abstract to be presented.

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**Session Classification:** Parallel A - WG1&3

**Track Classification:** WG3: Top, Higgs and EW Physics