“ttH(cc): Charm-quark identification with machine learning methods”

The talk presents the background knowledge and context for understanding the ttH(cc) analysis and what it will yield for Physics and for improved flavor-tagging algorithms at ATLAS. A two-slide aside within the talk also discusses the motivation for investigating the impact of training the GN3 flavor tagger with ML-generated ‘fast-sim’ data. The talk at large does not go deeper than analysis context and (time permitting) some details on preselection and sources of background for the analysis.

The talk features many figures from ATLAS’ introduction to GN2 paper “Transforming jet flavour tagging at ATLAS” (2026), as well as figures from various ATLAS presentations and a CMS ttH(cc) analysis paper (2025).

The talk possibly has too many slides, and so it is expected that I may skip a few slides while presenting, likely those on analysis event features and background. I have not begun my thesis work (I have been working on my qualifying project), and because some of the audience may be unfamiliar with experimental practices, I believe this would be the weakest section regardless.