

# Inclusive $B \rightarrow X_u \ell \nu$ : Towards NNLO Extractions of $V_{ub}$

*Thursday 26 September 2024 14:00 (30 minutes)*

In this talk, I will present a short overview of inclusive  $b \rightarrow u$  semileptonic decays, focusing on the current status of the BLNP and GGOU approaches—the two most active frameworks for  $V_{ub}$  extractions in recent years. I will delve deeper into the GGOU approach, highlighting our work and status on the NN $V_{ub}$  framework, which utilises neural networks for parametrising the required shape functions. I will very briefly discuss the calculation of perturbative power-suppressed corrections. And finally, I will outline our ongoing work on the extraction of NNLO corrections to the fully differential decay distribution.

**Presenter:** CAPDEVILA, Bernat (IFAE)

**Session Classification:** Heavy to light inclusive