

# Inclusive Semileptonic Decay from Lattice QCD

*Wednesday, 25 February 2026 10:00 (30 minutes)*

In this talk, we present the first fully non-perturbative computation of the decay rate of  $D_s \rightarrow X \ell \nu$  and of the associated leptonic moments, carried out on state-of-the-art ETMC ensembles at the physical point with four lattice spacings and three volumes. The extraction of the relevant smeared spectral densities from Euclidean four-point correlation functions has been performed with controlled statistical and systematic uncertainties by using the Hansen-Lupo-Tantalo method. Additionally, we present preliminary results of our ongoing calculation of the inclusive semi-leptonic  $B_s$  mesons decay rates with focus on some important technical aspects of the calculation.

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