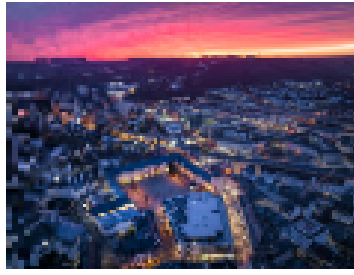


## Lattice meets Continuum



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# Inclusive charm and tau decays

*Thursday 3 October 2024 12:05 (40 minutes)*

The computation of observables from inclusive hadronic processes is widely regarded as a challenging task from the lattice QCD perspective. However, the access to such observables at the non-perturbative level is crucial, especially in Flavour Physics, where high-precision comparisons of first-principles theoretical predictions and experimental measurements could reveal discrepancies, potentially pointing to New Physics Scenarios beyond the Standard Model. A viable practical solution is provided by the Hansen-Lupo-Tantalo reconstruction method from Euclidean lattice correlation functions. Two recent applications of this method include the hadronic decays of the  $\tau$  lepton, allowing for the extraction of the  $V_{us}$  and  $V_{ud}$  CKM matrix elements, and the semi-leptonic decay of the charmed  $D_s$  meson. Alongside a discussion of the methodology, we illustrate results for both the applications.

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