

# BSM Heavy Flavours, Non-Locality, and searches in Colliders

*Tuesday, 4 June 2024 13:30 (1 hour)*

A number of gravitation-motivated theories, as well as theories with new coloured fermions predict heavy particle towers with spectral densities  $\rho(m^2)$  growing faster than  $e^{-m}$ , a characteristic of nonlocalizable theories. In this talk we will discuss a general approach for extracting the new Physics from the data. Although the approach can be applied to dark sectors, fifth force search or  $Z'/W'$  phenomenology, our main focus is in nonlocal QFTs. A series of ongoing measurements are briefly discussed.

The double-Higgs production measurement at the LHC is proposed as a highly sensitive probe of nonlocality at the electroweak scale.

## Please choose your flavour

Exotic

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