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Charm decays in the SM and NP potential

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In this talk we give an overview of the theory of charm decays. We present the special features that distinguish charm decays from other flavour processes and highlight the opportunities for the indirect discovery of NP in this sector. We explain the theoretical challenges present in the SM calculations of long-distance QCD effects, which are dominant both in the hadronic and the rare semileptonic decays of charmed mesons. We present some of the available frameworks for the estimation of such effects with an emphasis on data-driven approaches. Finally we compare the results of theoretical efforts so far to available experimental data such as CP-violating and angular observables, and suggest decay modes and observables for future searches.

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