Contribution ID: **7** Type: **Invited talk**

Excited charm/charmonium mesons and exotics from lattice QCD

Thursday 29 May 2025 09:15 (45 minutes)

I will summarise some recent progress in studying hadrons using lattice QCD. The spectroscopy and interactions of hadrons probe the strongly-interacting regime of QCD, and in recent years experiments have observed a number of puzzling hadrons that challenge our understanding of the strong interaction. Lattice QCD provides a method for performing first-principles computations of the properties of hadrons and hence a QCD-based understanding of the phenomena. However, the majority of hadrons decay strongly, i.e. they are resonances, and lattice calculations of these are challenging. I will present a selection of work that has advanced our understanding of hadrons such as results relevant for the exotic doubly-charmed $T_{cc}(3875)$ observed by LHCb, scalar and tensor charmonium resonances, and the $D_0^*(2300)$ and enigmatic $D_{s0}^*(2317)$ charm mesons.

Author: THOMAS, Christopher (University of Cambridge)

Presenter: THOMAS, Christopher (University of Cambridge)

Session Classification: Talks