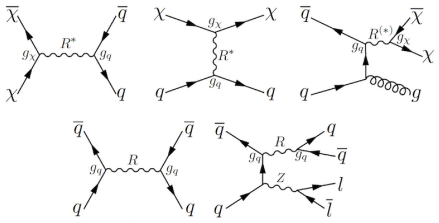

Contribution ID: **7** Type: **Talk**

Baryogenesis and Dark Matter from B Mesons (8'+2')

Wednesday, 3 June 2020 15:20 (10 minutes)

In this talk, based on arXiv:1810.00880 and ongoing work, I will present a new mechanism of Baryogenesis and Dark Matter production in which both the dark matter relic abundance and the baryon asymmetry arise from neutral B meson oscillations and subsequent decays in the early Universe.

This mechanism would have distinctive experimental signals that I will discuss in detail:

i) the new decay mode of B mesons into a baryon and missing energy, with a BR > 10^{-3}.
ii) a positive semileptonic asymmetry in neutral B meson decays, > 10^{-5}.
iii) the new decay mode of b-flavored baryons into mesons and missing energy, with BR > 10^{-3}.

These unique collider signatures are testable at current collider experiments, such as the LHC and Belle-II, allowing for a distinct probe of this mechanism.

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Session Classification: Wednesday