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## New physics and hidden sectors at Muon Collider

*Wednesday 23 August 2023 17:50 (15 minutes)*

Muon colliders offer enormous potential for the exploration of the particle physics frontier, representing the unique possibility of combining the high centre-of-mass energy and luminosity of hadron colliders with very precise measurements of lepton machines. They provide an unprecedented physics reach from Standard Model (SM) processes to new physics beyond the SM. The contribution presented will give a general overview of the latter topic, broadening from supersymmetry and dark matter to muon-specific opportunities for the study of  $g-2$  and B anomalies. In particular, the sensitivity of a 3 TeV Muon Collider to dark SUSY model, a hidden sector coupled to SM via supersymmetric neutralino portal characterized by multi muons in the final state, will be discussed along with some considerations on muon reconstruction performance.

### Collaboration / Activity

International Muon Collider

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