## PLHC2011 - Physics at LHC 2011



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## Signals of supersymmetry in flavour physics (20' + 5')

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We discuss the characteristic signals of supersymmetric models in low energy observables that are sensitive to flavour and CP violation. We focus in particular on two of the golden channels at LHCb: the rare Bs -  $\mu$ + $\mu$ -decay and CP violation in Bs mixing.

We show the distinct predictions for the above flavour observables within several supersymmetric frameworks, including the MSSM with Minimal Flavour Violation, and outline how the characteristic patterns of New Physics effects allow to distinguish the different models from each other. Finally, we also briefly outline the role and the interplay of the direct NP searches at the LHC with the indirect searches performed by low energy flavour physics observables

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