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Title: **Non-abelian anyons with ultracold atoms in artificial gauge potentials**

I will discuss the effect of an experimentally realizable artificial non-abelian magnetic field acting on a 2D ultracold atomic gas: the splitting of Landau levels can be computed and deformed Laughlin states are in general obtained in presence of strong interactions. Tuning the parameters of the non-abelian magnetic field, one can have degenerate Landau levels: I will show that, at the degeneracy points, ground-states with non-abelian excitations are obtained.