DAY 5 (27 June): 9:40 – 10:20

Multi-channel Kondo Models in non-Abelian Quantum Hall Droplets

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We study the coupling between a quantum dot and the edge of a non-Abelian fractional quantum Hall state which is spatially separated from it by an integer quantum Hall state. Near a resonance, the physics at energy scales below the level spacing of the edge states of the dot is governed by a k-channel Kondo model when the quantum Hall state is a Read-Rezayi state at filling fraction $\nu = 2 + k/(k+2)$ or its particle-hole conjugate at $\nu = 2 + 2/(k+2)$. The k-channel Kondo model is channel isotropic even without fine tuning in the former state; in the latter, it is generically channel anisotropic. In the special case of $k = 2$, our results provide a new venue, realized in a mesoscopic context, to distinguish between the Pfaffian and anti-Pfaffian states at filling fraction $\nu = 5/2$.