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Theory of Kondo transport through quantum dots equilibrium and non-equilibrium properties

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In my presentation I will discuss two aspects of the Kondo transport through quantum dots. First topic will be the Fano-Kondo effect in zero-bias conductance based on a theoretical model for the T-shaped quantum dots. Next I will concern with the non-equilibrium nature of the Kondo transport under a finite bias voltage. Based on the fourth order perturbation theory with respect to U for the Keldysh formalism, it is shown that the Kondo resonance splits into two peaks when the potential drop exceeds the Kondo temperature. Effect of the splitting on the conductance will be also discussed.

Keywords : nonequilibrium Kondo effect