

THE BATSHEVA DE ROTHSCHILD SEMINAR ON TOPOLOGY MEETS DISORDER AND INTERACTIONS: PRESENT CHALLENGES, FUTURE PROMISES 27-31 MAY, 2018

**RAMON INN** MITZPE RAMON

Home | About | Invited Speakers | Venue | Registration | Program | Scientific Committee | Photos

## **Two-stage Kondo effect**

Mikhail Kiselev

We consider a quantum dot with few orbital levels occupied by two electrons connected to two electric terminals. The generic model is given by a multi-level Anderson Hamiltonian. The weak- coupling theory at the particle-hole symmetric point is governed by a two-channel S = 1 Kondo model characterized by intrinsic channels asymmetry. Based on a conformal field theory approach we derived an effective Hamiltonian at a strong-coupling fixed point. The Hamiltonian capturing the low-energy physics of a two-stage Kondo screening represents the quantum impurity by a two - color local Fermi- liquid. Using non-equilibrium perturbation theory around the strong-coupling fixed point we analyse the transport properties of the model at finite temperature, Zeeman magnetic field and source-drain voltage applied across the quantum dot. We compute the Fermi-liquid transport constants and discuss different universality classes associated with emergent symmetries.