ID de Contribution: **22**   Type: **Invited talk**

Ergodic transition on the random regular graph: the exact diagonalization results

lundi 13 juin 2016 17:15 (45 minutes)

We show that the Anderson model on the random regular graph (RRG) possesses two transitions. One of them is the usual localization transition that happens at the disorder
strength $W=W_{c} \approx 18.2$ and the other one is the first order transition between the extended ergodic and non-ergodic (multifractal) states. It happens at $W=W_{E}\approx 10.0$ and manifests itself in the sharp jump in the fractal dimensions D_{1} and D_{2} which is seen at a finite number of sites $N>100\,000$ in the RRG. The results are compared with the calculations of the "Lyapunov exponent" for growing imaginary part of the particle self-energy by the generalized population dynamics method. The results are published as a preprint in arXiv:1605.02295.

Orateur: KRATSOV, Vladimir (ICTP Trieste)

Classification de Session: Afternoon Session2