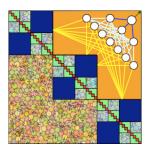
## **Mathematics Meets Physics on Disordered Systems**



ID de Contribution: 21 Type: Non spécifié

## Random Field Ising Model and Parisi-Sourlas Supersymmetry - some recent developments

vendredi 29 avril 2022 11:00 (1h 30m)

Numerical simulations of Random Field Ising Model suggest that Parisi-Sourlas supersymmetry and dimensional reduction are present for spatial dimension  $d > d_c$  and are lost for  $d < d_c$ , where the critical dimension  $d_c$  is somewhere between 4 and 5. I will lecture about a recent theoretical framework, based on perturbative renormalization group, which predicts a mechanism for the loss of supersymmetry and allows to compute the value of  $d_c$ . Alternative scenarios will also be discussed.

Orateur: Prof. RYCHKOV, Slava (IHES)