## **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.

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