Graduate

Probability Seminar

About replica symmetry breaking and correlation decay in the Ising model with field

Jamer Insupe Roldan Gonzales
University of Brasília

Date: 14/6/2019
Time: 14:15 Horas

MAT Mini-auditorium (AT–427/08)

Abstract. In this seminar will be given an introduction to the absence of replica symmetry for the Ising model with random field. The usual Gaussian field of [1] is changed for other non-Gaussian of [2]. Also in the random field will be presented the decay of correlation similar to [3] but this time in a hexagonal lattice and in non-Gaussian field. At the end will be showed an exponential decay of truncated correlations with non-uniform, bounded field at low temperatures using cluster expansion, that is inspired in [4].

References

[1] Chatterjee, S. (2015). Absence of replica symmetry breaking in the random field Ising model. Communications in Mathematical Physics, 337(1), 93-102.

[2] Roldan, J. & Vila R. (2019) on the absence of replica symmetry breaking for the random field Ising model in the presence of non-Gaussian disorders. preprint ArXiv:1811.07003v2.

[3] Chatterjee, S. (2018). On the decay of correlations in the random field Ising model. Communications in Mathematical Physics, 362(1), 253-267.

[4] Friedli, S., & Velenik, Y. (2017). Statistical mechanics of lattice systems: a concrete mathematical introduction. Cambridge University Press.