

abstract

ANALYSIS/MATHEMATICAL PHYSICS SEMINAR

Topic:

Speaker:

Affiliation:

Date:

Time/Room:

We develop the droplet scaling theory for the low temperature critical behavior of two-dimensional Ising spin glasses. The models with integer bond energies vs. continuously-distributed bond energies are in the same universality class in a regime of intermediate length scales and temperature scales, while they differ at shorter length scales and lower temperatures. This work was motivated and is supported by numerical results using advanced polynomial-time algorithms to explore the free energies of these systems on large (up to 512 by 512) samples. (Joint work with Alan Middleton (Syracuse) and Creighton Thomas (TAMU))