Seminar of Probability and Stochastic Process

Wednesday, 5th October, from 14h15 to 15h00 <u>GR A3 32</u>, EPFL, Ecublens

Dr. Loren Coquille

University of Geneva

Gibbs measures of the 2d Ising model

Abstract:

In the late 1970s, in two celebrated papers, Aizenman and Higuchi independently established that all infinite-volume Gibbs measures of the 2d Ising model are a convex combination of the two pure phases. After introducing the relevant definitions and concepts needed to understand the physical content of this result, I will present a new approach to it, with a number of advantages:

(i) a finite-volume, quantitative analogue (implying the classical claim) is obtained;

(ii) the scheme of the proof seems more natural and provides a better picture of the underlying physical phenomenon;

(iii) this new approach seems substantially more robust (possible extension to the Potts model).

This is a joint work with Yvan Velenik.

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