

ATELIER « SYSTÈMES DÉSORDONNÉS : VERRES DE SPIN »
8–13 JUIN 2009

WORKSHOP “DISORDERED SYSTEMS: SPIN GLASSES”
JUNE 8–13, 2009

The ROSt Perspective on Ultrametricity

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There has been recent progress on the question of ultrametricity of the Gibbs measure in mean-field spin glasses based on the Ghirlanda–Guerra identities, due to D. Panchenko, as well as on the stochastic stability of the Gibbs measure. In the first part of this talk, I will review some results and conjectures on the latter point of view highlighting connections with the former. Secondly, I will present a simple spin glass, introduced by E. Bolthausen and N. Kistler, where it can be shown that ultrametricity does not hold although it is retrieved by a small perturbation of the system.

This last part is joint work with N. Kistler.